QK216
.S64
1895
v.4

ENUMERATIO

PLANTARUM GUATEMALENSIUM

NECNON SALVADORENSIUM HONDURENSIUM NICARAGUENSIUM COSTARICENSIUM,

QUAS EDIDIT

JOHN DONNELL SMITH.

PARS IV.

Mo. Bot. Garden,
1895.

OQUAWKÆ IN REPUBL. ILLINOIS.
APUD H. N. PATTERSON
Typographum Botanicum,
MDCCCXCV.

Etsi huius enumerationis plantæ non solum in Guatemala sed etiam in ceteris Rebuspublicis Centraliamericanis ortæ sunt, melius tamen visum est omnes in una et eadem serie continenter numerata comprehendere, cum ampliora colligendi spatia mutatis et titulis schedularum, quæ plantis distributis adiectæ sunt, et titulo huius opusculi satis adpareant.

Sub capitulo *Additamentorum* aliquot accedunt plantæ, quæ cum iam hic libellus imprimeretur serius determinatæ sunt quam ut inter ceteras ordinate collocari potuerint.

Nunc quoque viris botanicis ordinum ab ipsis tractatorum peritissimis, a quibus adiuvantibus magna pars materiæ elaborata est, magis quam antea impellor ut maximas tester gratias.

J. D. S.

Baltimorii, m. Oct. 1895.

PLANTÆ GUATEMALENSES

NECNON SALVADORENSES HONDURENSES NICARAGUENSES COSTARICENSES.

5702. Clematis dioica, L., var. australis, Eichl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

4207. Clematis dioica, L., var. Brasiliana, Eichl.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4305. Clematis dioica, L., var. Brasiliana, Eichl.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4737. Clematis dioica, L., var. Brasiliana, Eichl.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

5125. Clematis dioica, L., var. Brasiliana, Eichl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Dec. 1888. Leg. C. Thieme.

4304. Clematis grossa, Benth.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5000. Curatella Americana, L.

Rivas, Depart. Rivas, Nicaragua, alt. 100 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5001. Curatella Americana, L.

Hacienda Animas, Prov. Guanacaste, Costa Rica, alt. 500 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5008. Curatella Americana, L.

Rio Sapoá, Prov. Guanacaste, Costa Rica, 500 pp.
M. Apr. 1893. Leg. W. C. Shannon.

1484. Porcelia microcarpa, Donnell Smith

in Botan. Gaz. xx. 1.
Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 300 pp.
M. Apr. 1892. Leg. J. D. S.

474. Porcelia Nicaraguensis, Benth. et Hook.

Gen. Pl. i. 956.
(*Sapranthus Nicaraguensis*, Seem. Journ. Bot. iv. 369, t. liv.)
Rio Quililá, Santa Ana, Depart. Alta Verapaz, Guatemala, alt. 2500 pp.
M. Nov. 1879. Leg. von Türckheim.

4508. Porcelia Nicaraguensis, Benth. et Hook.

(*Sapranthus Nicaraguensis*, Seem. Journ. Bot. iv. 369, t. liv.)
Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Dec. 1889. Leg. Heyde et Lux.

4519. Porcelia Nicaraguensis, Benth. et Hook.

(*Sapranthus Nicaraguensis*, Seem. Journ. Bot. iv. 369, t. liv.)
Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Maj. 1893. Leg. Heyde et Lux.

5041. Porcelia Nicaraguensis, Benth. et Hook.

(*Sapranthus Nicaraguensis*, Seem. Journ. Bot. iv. 369, t. liv.)
Maniadero, Depart. Chinandega, Nicaragua, alt. 340 pp.
M. Mart. 1893. Leg. W. C. Shannon.

5129. Duguetia leiophylla, Donnell Smith

in Botan. Gaz. xx. 281.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

1491. Cymbopetalum stenophyllum, Donnell Smith

in Botan. Gaz. xx. 2.
Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.
M. Apr. 1892. Leg. J. D. S.

1385. Anona Cherimolia, Mill.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

3074. Anona Cherimolia, Mill.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4738. Anona Cherimolia, Mill.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5128. Anona reticulata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jul. 1888. Leg. C. Thieme.

5126. Cissampelos Pareira, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jun. 1888. Leg. C. Thieme.

5703. Cissampelos Pareira, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4307. Argemone Mexicana, L.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

4700. Argemone Mexicana, L.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Maj. 1892. Leg. W. C. Shannon.

5705. Argemone Mexicana, L.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Maj. 1887. Leg. A. Alfaro.

4739. Bocconia arborea, Watson

in Proc. Amer. Ac. xxv. 141.
San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5704. Bocconia frutescens, L.

Guacamayo incolarum.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper

5708. Nasturtium palustre, DC., var. brevipes, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5707. Lepidium Humboldtii, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5709. Gynandropsis pentaphylla, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5710. Gynandropsis speciosa, DC.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Nov. 1887. Leg. A. Alfaro.

5133. Cratæva Tapia, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

4435. Ionidium parietariæfolium, DC.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala,
alt. 6000 pp.
M. Maj. 1893. Leg. Heyde et Lux.

5127. Ionidium parietariæfolium, DC.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1889. Leg. C. Thieme.

5010. Cochlospermum hibiscoides, Kunth.
Rio Sapoá, Prov. Guanacaste, Costa Rica, 650 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5131. Cochlospermum hibiscoides, Kunth.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Febr. 1890. Leg. C. Thieme.

179. Bixa Orellana, L.
Las Animas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

192. Bixa Orellana, L.
Ab incolis *Achiote* dicitur.
San Martín, Depart. Retalhuleu, Guatemala, alt. 1500 pp.
M. Oct. 1891. Leg. W. C. Shannon.

5130. Bixa Orellana, L.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

5132. Xylosma elliptica, Clos.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1890. Leg. C. Thieme.

5715. Xylosma elliptica, Clos.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

4741. Xylosma velutinum, Tr. et Planch.
Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Mart. 1894. Leg. J. D. S.

4701. Polygala Americana, Mill.
Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Maj. 1892. Leg. W. C. Shannon.

4438. Polygala asperuloides, H. B. K.
Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5139. Polygala asperuloides, H. B. K.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1889. Leg. C. Thieme.

4313. Polygala floribunda, Benth.
Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1892. Leg. Heyde et Lux.

3067. Polygala monninoides, H. B. K.
La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

4314. Polygala monninoides, H.B.K.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4441. Polygala paniculata, L.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5140. Polygala paniculata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1888. Leg. C. Thieme.

5112. Securidaca Micheliana, Chodat n. sp. ined.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

5716. Monnina Costaricensis, Chodat

in Durand et Pittier Prim. Fl. Costar. Fasc. i. 207.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

4742. Monnina evonymoides, Schlecht.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

4439. Monnina Xalapensis, H.B.K.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1890. Leg. Heyde et Lux.

3080. Stellaria ovata, Willd.

Ambelice, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

4748. Stellaria ovata, Willd.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

5711. Stellaria ovata, Willd.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

6065. Stellaria ovata, Willd.

Las Marias, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5712. Stellaria prostrata, Baldw.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

3081. Arenaria alsinoides, Willd.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3082. Arenaria alsinoides, Willd.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5713. Arenaria alsinoides, Willd.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

321. Arenaria bryoides, Willd.,
var. Guatemalensis, Hemsl.

Volcan Tajumulco, Depart. San Márcos, Guatemala, alt. 13,740 pp.
M. Jan. 1892. Leg. W. C. Shannon.

4747. Drymaria cordata, Willd.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

5608. Drymaria cordata, Willd.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.
M. Oct. 1888. Leg. C. Thieme.

3084. Drymaria villosa, Schlecht.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

5137. Portulaca oleracea, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1888. Leg. C. Thieme.

5706. Portulaca oleracea, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

6066. Portulaca oleracea, L.

Rio Maria Linda, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Aug. 1893. Leg. Heyde et Lux.

5138. Portulaca pilosa, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1889. Leg. C. Thieme.

6305. Talinum patens, Willd.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

4744. Vismia Guianensis, Choisy.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

4743. Clusia minor, L.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

4315. Rheedia edulis, Planch. et Tr.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

6302. Calophyllum Calaba, Jacq.

Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

5141. Ternstrœmia Tepezapote, Cham. et Schl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Maj. 1888. Leg. C. Thieme.

1453. Saurauja Kegeliana, Schlecht.

in Bot. Zeitung (1853), p. 694.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

4328. Saurauja Kegeliana, Schlecht.

in Bot. Zeitung (1853), p. 694.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4746. Saurauja macrophylla, Linden.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

6077. Saurauja macrophylla, Linden.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4745. Saurauja scabrida, Hemsl.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

5714. Saurauja scabrida, Hemsl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5723. Malva parviflora, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5721. Anoda acerifolia, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5143. Gaya disticha, Presl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Apr. 1888. Leg. C. Thieme.

2928. Sida acuta, Burm.,

var. carpinifolia, K. Schum.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

5006. Sida anomala, St. Hil.

Volcan Orosí, Prov. Guanacaste, Costa Rica, alt. 1200 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5146. Sida arguta, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1889. Leg. C. Thieme.

6069. Sida arguta, Sw.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Sept. 1893 Leg. Heyde et Lux.

4326. Sida Lindeniana, Turcz.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

4751. Sida Lindeniana, Turcz.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Apr. 1894. Leg. J. D. S.

6299. Sida Lindeniana, Turcz.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

5142. Sida linifolia, Juss.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

5148. Sida paniculata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1888. Leg. C. Thieme.

5722. Sida rhombifolia, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

6068. Wissadula mucronulata, A. Gray.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

4749. Wissadula Zeylanica, Med.,
var. Guatemalensis, E. G. Baker

in Journ Bot. xxxi. 70.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

5149. Wissadula Zeylanica, Med.,
var. Guatemalensis, E. G. Baker

in Journ. Bot. xxxi. 70.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 1000 pp.
M. Febr. 1889. Leg. C. Thieme.

4316. Abutilon discissum, Schlecht.

in Linnæa, xxv. 218.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala,
alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

6072. Abutilon discissum, Schlecht.

in Linnæa, xxv. 218.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

4445. Abutilon elatum, Griseb.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1890. Leg. Heyde et Lux.

5147. Abutilon Jacquini, G. Don.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1887. Leg. C. Thieme.

5145. Abutilon pedunculare, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1888. Leg. C. Thieme.

6073. Abutilon venosum, Lemaire.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4750. Malachra capitata, L.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

6070. Pavonia paniculata, Cav.

Rio Maria Linda, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

5144. Pavonia rosea, Schlecht.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1887. Leg. C. Thieme.

5720. Pavonia rosea, Schlecht.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5153. Malvaviscus arboreus, Cav.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Sept. 1887. Leg. C. Thieme.

5719. Malvaviscus arboreus, Cav.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

6071. Malvaviscus arboreus, Cav.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

5151. Hibiscus furcellatus, Desv.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Febr. 1887. Leg. C. Thieme.

5718. Hibiscus bifurcatus, Cav.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

5012. Gossypium Davidsoni, Kell.

Rio Choluteca, Depart. Choluteca, Honduras, alt. 0 pp.
M. Febr. 1893. Leg. W. C. Shannon.

5157. Helicteres guazumæfolia, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1887. Leg. C. Thieme.

6074. Melochia hirsuta, Cav.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5154. Melochia pyramidata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1888. Leg. C. Thieme.

6079. Melochia pyramidata, L.

La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5155. Waltheria Americana, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Febr. 1887. Leg. C. Thieme.

147. Theobroma Cacao, L.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

4448. Guazuma ulmifolia, Lam.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Maj. 1893. Leg. Heyde et Lux.

5013. Guazuma ulmifolia, Lam.

Rio de Las Lajas, Depart. Rivas, Nicaragua, alt. 120 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5014. Guazuma ulmifolia, Lam.

San Pedro, Depart. Choluteca, Honduras, alt 140 pp.
M. Febr. 1893. Leg. W. C. Shannon.

5157[B]. Buettneria Carthaginensis, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.
M. Febr. 1887. Leg. C. Thieme.

6076. Buettneria Carthaginensis, Jacq.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

4329. Heliocarpus Americanus, L.,

forma floribus masculis pleiostemonis, ovario stipitato et stylo filiformi præditis. (*H. polyandrus, Watson!*)

Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5015. Luehea Endopogon, Turcz.

Liberia, Prov. Guanacaste, Costa Rica, alt. 400 pp.

M. Apr. 1893. Leg. W. C. Shannon.

6308. Luehea Endopogon, Turcz.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Aug. 1894. Leg. Heyde et Lux.

4752. Luehea Seemannii, Triana et Planch.

Obs.—A *L. speciosa* Willd., satis distincta videtur.

Guacimo incolarum.

Rio Reventazon, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

6084. Luehea speciosa, Willd.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

5158. Muntingia Calabura, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Apr. 1887. Leg. C. Thieme.

6411. Muntingia Calabura, L.

Chapulin incolarum.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

5159. Prockia Crucis, L.

San Pedro Sula, Depart. Sauta Bárbara, Honduras, alt. 1200 pp.

M. Maj. 1889. Leg. C. Thieme.

5115. Hasseltia floribunda, H. B. K.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

2558. Byrsonima crassifolia, H. B. K.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

3271. Byrsonima crassifolia, H. B. K.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3700. Byrsonima crassifolia, H. B. K.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5017. Byrsonima crassifolia, H. B. K.

Rio Sapoá, Prov. Guanacaste, Costa Rica, alt. 500 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5161. Byrsonima crassifolia, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Oct. 1887. Leg. C. Thieme.

217. Malpighia glabra, L.?

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.
M. Oct. 1891. Leg. W. C. Shannon.

5162. Malpighia glabra, L.

determ. Rose.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Nov. 1887. Leg. C. Thieme.

6080. Malpighia glabra, L.

determ. Rose.
Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

2556. Malpighia glabra, L.,
var. acuminata, A. Juss.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.
M. Maj. 1892. Leg. J. D. S.

5163. Bunchosia nitida, A. Rich.

determ. Rose.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jul. 1888. Leg. C. Thieme.

3704. Galphimia Humboldtiana, Bartl.

determ. Rose.
Barberena, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4455. Heteropteris Beecheyana, A. Juss.

determ. Rose.
Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5166. Heteropteris Beecheyana, A. Juss.

determ. Rose.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Jan. 1888. Leg. C. Thieme.

6081. Heteropteris Beecheyana, A. Juss.

determ. Rose.
Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

3268. Heteropteris floribunda, H. B. K.

determ. Rose.
San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5169. Heteropteris floribunda, H. B. K.

determ. Rose.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

2551. Heteropteris laurifolia, Juss.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.
M. Apr. 1892. Leg. J. D. S.

5016 Heteropteris retusa, Donnell Smith

in Botan. Gaz. xvi. 2.

Rio Choluteca, Depart. Choluteca, Honduras, alt. 0 pp.
M. Febr. 1893. Leg. W. C. Shannon.

4753. Stigmaphyllon ellipticum, Ad. Juss.

determ. Rose.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5164. Stigmaphyllon fulgens, A. Juss.?

determ. Rose.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Oct. 1888. Leg. C. Thieme.

5168. Stigmaphyllon periplocifolium, A. Juss.?

determ. Rose.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

6309. Banisteria argentea, Spreng.?

determ. Rose.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.
M. Jan. 1894. Leg. Heyde et Lux.

5167. Banisteria Schomburgkiana, Benth.

determ. Rose.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Apr. 1890. Leg. C. Thieme.

5165. Tetrapteris Schiedeana, Schlecht.?

determ. Rose.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Oct. 1888. Leg. C. Thieme.

2930. Tribulus maximus, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jul. 1892. Leg. Heyde et Lux.

4327. Tribulus maximus, L.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

5170. Tribulus maximus, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1887. Leg. C. Thieme.

4703. Oxalis divergens, Benth.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Maj. 1892. Leg. W. C. Shannon.

5725[B]. Oxalis latifolia, H. B. K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4702. Oxalis Neæi, DC.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5171. Oxalis Neæi, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Jun. 1888. Leg. C. Thieme.

6312. Oxalis Neæi, DC.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4757. Oxalis pilosissima, Turcz.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 7000 pp.

M. Mart. 1894. Leg. F. N. Cox.

4758. Impatiens fulva, Nutt.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 7000 pp.

M. Mart. 1894. Leg. F. N. Cox.

3478. Zanthoxylum foliolosum, Donnell Smith

in Botan. Gaz. xviii. 1.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4755. Zanthoxylum Limoncello, Triana et Planch.

Prodr. Fl. Nov.-Granat.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

5726. Zanthoxylum Limoncello, Triana et Planch.

Prodr. Fl. Nov.-Granat.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4447. Zanthoxylum Pterota, H. B. K.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

3058. Peltostigma pentaphyllum, Donnell Smith

in Botan. Gaz. xix. 1.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4437. Peltostigma pentaphyllum, Donnell Smith

in Botan. Gaz. xix. 1.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

2020. Triphasia trifoliata, DC.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Mart. 1890. Leg. Trabanino cl. M. D.

3962. Citrus medica, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5636. Picramnia Bonplandiana, Tul.?

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1888. Leg. C. Thieme.

4756. Picramnia ciliata, Mart.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

2568. Picramnia quaternaria, Donnell Smith

in Botan. Gaz. xx. 3.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S

4332. Picramnia quaternaria, Donnell Smith

in Botan. Gaz. xx. 3.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4333. Picramnia quaternaria, Donnell Smith

in Botan. Gaz. xx. 3.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2663. Melia Azedarach, L.

Cuyotenango, Depart. Suchitepéquez, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

3273. Melia Azedarach, L.,

forma glabrior.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5727[B]? Melia Azedarach, L.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Nov. 1887. Leg. A. Alfaro.

2570. Cabralea insignis, C. DC.

in Botan. Gaz. xix. 1.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

3276. Guarea Luxii, C. DC.

in Botan. Gaz. xix. 2.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

2573. Trichilia cuneata, Radlk.

determ. C. de Candolle.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Mart. 1892. Leg. J. D. S.

2577. Trichilia cuneata, Radlk.

determ. C. de Candolle.

Naranjo, Depart. Escuintla, Guatemala, alt. 300 pp.

M. Mart. 1892. Leg. J. D. S.

2574. Trichilia Heydeana, C. DC.

in Botan. Gaz. xix. 3.

Naranjo, Depart. Escuintla, Guatemala, alt. 300 pp.

M. Mart. 1892. Leg. J. D. S.

3274. Trichilia Heydeana, C. DC.

in Botan. Gaz. xix. 3.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3275. Trichilia Heydeana, C. DC.

in Botan. Gaz. xix. 3.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4451. Trichilia Heydeana, C. DC.

in Botan. Gaz. xix. 3.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4454. Trichilia Heydeana, C. DC.

in Botan. Gaz. xix. 3.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Febr. 1893. Leg. Heyde et Lux.

3706. Trichilia Œrstediana, C. DC.

determ. C. de Candolle.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4452. Trichilia Œrstediana, C. DC.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Apr. 1890. Leg. Heyde et Lux.

2964. Trichilia spondioides, Sw.

determ. C. de Candolle.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3037. Trichilia spondioides, Sw.

determ. C. de Candolle.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4453. Trichilia spondioides, Sw., var. gibbosifolia, C. DC.

in Botan. Gaz. xx. 3.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4126. Cedrela fissilis, Vell.

determ. C. de Candolle.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

2571. Cedrela impari-pinnata, C. DC.

in Botan. Gaz. xix. 4.

Volcan de Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

350. Heisteria acuminata, Benth. et Hook.

Coatepeque, Depart. San Márcos, Guatemala, alt. 1490 pp.

M. Jan. 1892. Leg. W. C. Shannon.

4446. Heisteria acuminata, Benth. et Hook.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.

M. Nov. 1889. Leg. Heyde et Lux.

4760. Heisteria Costaricensis, Donnell Smith

in Botan. Gaz. xix. 255.

Rio Reventazon, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

6313. Ximenia Americana, L.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4125. Wimmeria cyclocarpa, Radlk.

in Botan. Gaz. xviii. 199.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6088. Karwinskia Humboldtiana, Zucc.

Barberena, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4127. Gouania tomentosa, Jacq.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4763. Gouania tomentosa, Jacq.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

5172. Vitis Caribæa, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1889. Leg. C. Thieme.

4759. Vitis rhombifolia, Baker.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5174. Vitis rhombifolia, Baker.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Aug. 1888. Leg. C. Thieme.

2488. Vitis sicyoides, Morales.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Febr. 1892. Leg. J. D. S.

5173. Vitis sicyoides, Morales.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Nov. 1887. Leg. C. Thieme.

5731. Vitis sicyoides, Morales.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

6085. Vitis sicyoides, Morales.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jun. 1893. Leg. Heyde et Lux.

6086. Vitis sicyoides, Morales,

forma ramis *Puccinea incarcerata*. Leveille, infestis.
(*Spondylantha aphylla*, Presl.)

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893 Leg. Heyde et Lux.

6092. Serjania Caracasana, Willd.,

forma genuina.
determ. Radlkofer.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

5177. Serjania cardiospermoides, Schl. et Cham.

forma leptothyrsa.

A forma *genuina* appellanda differt foliolis apice obtusatis mucronulatis, præsertim subtus molliter pubescentibus, sepalis 3. et 5. altius coalitis, thyrsis longissimis (usque ad 32 cm. longis) gracilibus.
determ. Radlkofer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1838. Leg. C. Thieme.

5178. Serjania impressa, Radlk.

determ. Radlkofer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1887. Leg. C. Thieme.

4765. Serjania Mexicana, Willd.

determ. Radlkofer.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

5176. Serjania Mexicana, Willd.

determ. Radlkofer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

6091. Serjania punctata, Radlk.

in Botan. Gaz. xx. 281.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

4764. Serjania sordida, Radlk.

determ. Radlkofer.

Rio Virilla, Prov. San José, Costa Rica, alt. 3200 pp.
M. Mart. 1894. Leg. J. D. S.

5018. Serjania triquetra, Radlk.

determ. Radlkofer.

Usulután, Depart. Usulután, Salvador, alt. 100 pp.

M. Jan. 1893. Leg. W. C. Shannon.

4762. Cardiospermum grandiflorum, Sw., forma elegans, Radlk.

in Sitzungsber. K. Bayer. Ac. 1878, p. 260.

determ. Radlkofer.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5182. Paullinia clavigera, Schlecht.

determ. Radlkofer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Febr. 1887. Leg. C. Thieme.

4766. Paullinia Costaricensis, Radlk.

in Serj. Suppl. 1886, p. 157, sub n. 138.

determ. Radlkofer.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

6315. Paullinia Costaricensis, Radlk.

in Serj. Suppl. 1886, p. 157, sub n. 138.

Chicacao, Depart. Sololá, Guatemala, alt. 1500 pp.

M. Febr. 1894. Leg. Heyde et Lux.

6093. Paullinia hymenobractea, Radlk.

in Botan. Gaz. xx. 282.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6089. Thouinia acuminata, Watson, var. pubicalyx, Radlk.

in Botan. Gaz. xviii. 200.

determ. Radlkofer.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

6294. Exothea paniculata, Radlk.

(*Hypelate paniculata*, Camb.)

determ. Radlkofer.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Aug. 1893. Leg. Heyde et Lux.

4455. Turpinia occidentalis, Don ?

determ. Radlkofer.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

2576. Turpinia paniculata, Vent.

determ. Radlkofer.

San Andrés, Depart. Retalhuleu, Guatemala, alt. 1400 pp.

M. Apr. 1892. Leg. J. D. S.

4330. Rhus terebinthifolia, Cham. et Schl.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

5729. Rhus terebinthifolia, Cham. et Schl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4449. Anacardium occidentale, L.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5019. Anacardium occidentale, L.

Chinandega, Depart. Chinandega, Nicaragua, alt. 180 pp.

M. Mart. 1893. Leg. W. C. Shannon.

4761. Coriaria thymifolia, H. B. K.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7000 pp.

M. Mart. 1894. Leg. J. D. S.

5020. Moringa pterygosperma, Gaertn.

Rio Choluteca, Depart. Choluteca, Honduras, alt. 0 pp.

M. Febr. 1893. Leg. W. C. Shannon.

5021. Moringa pterygosperma, Gærtn.

Jiquilisco, Depart. Usulután, Salvador, alt. 220 pp.

M. Jan. 1893. Leg. W. C. Shannon.

569. Crotalaria anagyroides, H. B. K.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

571. Crotalaria anagyroides, H. B. K.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3731. Crotalaria bupleurifolia, Schlecht.

determ. Micheli.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4159. Crotalaria incana, L.

determ. Micheli.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5746. Crotalaria incana, L.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3717. Crotalaria longirostrata, Hook. et Arn.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4137. Crotalaria Maypurensis, H. B. K.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5187. Crotalaria Maypurensis, H. B. K.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Aug. 1888. Leg. C. Thieme.

1020. Crotalaria ovalis, Pursh.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

5186. Crotalaria ovalis, Pursh.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Aug. 1888. Leg. C. Thieme.

5747. Crotalaria ovalis, Pursh,

forma minor et majis pubescens.

Obs. C. ovalis in area lata dispersa, multo variabilis, sed foliis ovatis, sessilibus, racemis paucifloris, bracteis angustis divaricatis facile recognoscenda. determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3735. Crotalaria pumila, Orteg.

determ. Micheli.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

2807. Crotalaria vitellina, Ker.

determ. Micheli.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

2808. Crotalaria vitellina, Ker.

determ. Micheli.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. J. D. S.

3284. Crotalaria vitellina, Ker.

determ. Micheli.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3716. Crotalaria vitellina, Ker.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4798. Lupinus Aschenbornii, Schauer.

determ. Micheli.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

4799. Lupinus Clarkei, Œrst.

determ. Micheli.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7000 pp.

M. Mart. 1894. Leg. J. D. S.

568. Lupinus flabellaris, Bertol.

determ. Micheli.

Volcan Tajumulco, Depart. San Márcos, Guatemala, alt. 11,000 pp.

M. Jan. 1892. Leg. W. C. Shannon.

1005. Lupinus Mexicanus, Cerv.?

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

3679. Lupinus vaginatus, Cham. et Schl.

determ. Micheli.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 12,000 pp.

M. Jun. 1892. Leg. W. C. Shannon.

1013. Lupinus.

Species verisimiliter nova.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

531. Spartium junceum, L.

Verisimiliter ex Europa in hortos illatum.

determ. Micheli.

Chiantla, Depart. Huehuetenango, Guatemala, alt. 6300 pp.

M. Dec. 1891. Leg. W. C. Shannon.

4796. Trifolium amabile, H. B. K.

determ. Micheli.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

3746. Eysenhardtia amorphoides, H. B. K.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3744. Dalea alopecuroides, Nutt.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5755. Dalea alopecuroides, Nutt.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

999. Dalea cinerea, Moric. ex sched. Benth. in herb. Kew.; Micheli in Botan. Gaz. xx. 283.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

4465. Dalea cinerea, Moric. ex Sched. Benth.

in herb. Kew; Micheli in Botan. Gaz. xx. 283.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1889. Leg. Heyde et Lux.

4164. Dalea diffusa, Moric.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

1000. Dalea microphylla, H. B. K.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Rosalío Gómez.

3314. Dalea microphylla, H. B. K.

determ. Micheli.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4166. Dalea pectinata, Kunth.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4131. Dalea phymatodes, Willd.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6128. Dalea phymatodes, Willd.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

5753. Indigofera Costaricensis, Benth.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

3755. Indigofera Costaricensis, Benth., affinis?

Obs. Species forte nova; notis pluribus a I. Costaricensi distincta; specimen unicum vix evolutum descriptionem accuratam non permitit. determ. Micheli.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

1170. Indigofera lespedezioides, H. B. K.?

determ. Micheli.

Depart. Peten, Guatemala.

1889. Leg. R. Walker.

3738. Indigofera lespedezioides, H. B. K.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3688. Indigofera mucronata, Spreng.

determ. Micheli.

Jutiapa, Depart. Jutiapa, Guatemala, alt. 1200 pp.

M. Oct. 1892. Leg. W. C. Shannon.

3728. Indigofera mucronata, Spreng.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5195. Indigofera mucronata, Spreng.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Nov. 1888. Leg. C. Thieme.

6110. Indigofera mucronata, Spreng.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5202. Tephrosia crassifolia, Benth.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Nov. 1888. Leg. C. Thieme.

4142. Tephrosia toxicaria, Pers.

determ. Micheli.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6111. Tephrosia toxicaria, Pers.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

6129. Tephrosia toxicaria, Pers.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

3315. Gliricidia Guatemalensis, Micheli

in Bull. Herb. Boiss. ii. 442, t. x.

Sacabajá, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

2813. Gliricidia maculata, H. B. K.

determ. Micheli.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Febr. 1892. Leg. J. D. S.

5030. Gliricidia maculata, H. B. K.

determ. Micheli.

Ilopango, Depart. San Salvador, Salvador, alt. 2060 pp.

M. Dec. 1892. Leg. W. C. Shannon.

5201. Gliricidia maculata, H. B. K.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1890. Leg. C. Thieme.

3296. Gliricidia maculata, H. B. K.,
var. multijuga, Micheli
in Botan. Gaz. xx. 284.
Madre Cacao incolarum.
Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Apr. 1892. Leg. Heyde et Lux.

536. Diphysa robinioides, Benth.
determ. Micheli.
Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

3286. Diphysa robinioides, Benth.
determ. Micheli.
Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

5758. Diphysa robinioides, Benth.
Guachipelin incolarum.
determ. Micheli.
San Matéo, Prov. Alajuela, Costa Rica, alt. 900 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

6125. Diphysa robinioides, Benth.
determ. Micheli.
Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Nov. 1893. Leg. Heyde et Lux.

2812. Diphysa sennoides, Benth. et Œrst.
Obs. A *D. robinioides*, Benth., vix satis distincta videtur.
determ. Micheli.
La Corona, Depart. Guatemala, Guatemala, alt. 4800 pp.
M. Febr. 1892. Leg. J. D. S.

3305. Cracca bicolor, Micheli
in Bull. Herb. Boiss. ii. 444, t. xi.
Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3301. Cracca mollis, Benth. et Œrst.
determ. Micheli.
Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

3745. Cracca mollis, Benth. et Œrst.
determ. Micheli.
Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Sept. 1892. Leg. Heyde et Lux.

5206. Craccæ sp.
Obs. Affinis C. mollis videtur sed distincta; specimina manca.
determ. Micheli.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Febr. 1889. Leg. C. Thieme.

555. Sesbania macrocarpa, Muehl.
determ. Micheli.
Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

539. Sutherlandia frutescens, R. Br.

In hortis culta.

determ. Micheli.
Tejutla, Depart. San Márcos, Guatemala, alt. 8150 pp.
M. Jan. 1892. Leg. W. C. Shannon.

1037. Astragalus Guatemalensis, Hemsl.

determ. Micheli.
Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

3676. Astragalus Guatemalensis, Hemsl.,

forma minor, alpina.

determ. Micheli.
Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 8500 pp.
M. Jun. 1892. Leg. W, C. Shannon.

3680. Astragalus Guatemalensis, Hemsl.,

forma minor, alpina.

determ. Micheli.
Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 12,400 pp.
M. Aug. 1892. Leg. W. C. Shannon.

3715. Nissolia fruticosa, Jacq.

determ. Micheli.
Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

4459. Nissolia fruticosa, Jacq.

determ. Micheli.
Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Maj. 1893. Leg. Heyde et Lux.

6112. Nissolia fruticosa, Jacq.

determ. Micheli.
Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

3677. Poiretia scandens, Vent.

determ. Micheli.
Volcan Flores, Depart. Jutiapa, Guatemala, alt. 2500 pp.
M. Oct. 1892. Leg. W. C. Shannon.

4174. Poiretia scandens, Vent.

determ. Micheli.
Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

561. Æschynomene Americana, L.

determ. Micheli.
Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.
M. Oct. 1891. Leg. W. C. Shannon.

4160. Æschynomene Americana, L.

determ. Micheli.
Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892 Leg. Heyde et Lux.

5756. Æschynomene Americana, L.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

6103. Æschynomene Americana, L.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4172. Æschynomene Americana, L.,
var. longifolia, Micheli

in Botan. Gaz. xx. 284.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6099. Æschynomene Americana, L.,
var. longifolia, Micheli

in Botan. Gaz. xx. 284.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3710. Æschynomene hispida, Willd.

determ. Micheli.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5213. Æschynomene hispida, Willd.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jun. 1888. Leg. C. Thieme.

6097. Æschynomene hispida, Willd.

determ. Micheli.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

5217. Æschynomene paniculata, Willd.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1890. Leg. C. Thieme.

3752. Stylosanthes Guyanensis, Aubl.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4457. Stylosanthes Guyanensis, Aubl.

determ. Micheli.

La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

6120. Stylosanthes Guyanensis, Aubl.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4162. Stylosanthes Guyanensis, Aubl.,
forma minor, compacta, microphylla.

determ. Micheli.
Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

537. Arachis hypogæa, L.

determ. Micheli.
Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

3570. Zornia diphylla, Pers.

determ. Micheli.
Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.
1892. Leg. von Türckheim.

3685. Zornia diphylla, Pers.

determ. Micheli.
Volcan Flores, Depart. Jutiapa, Guatemala, alt. 2500 pp.
M. Oct. 1892. Leg. W. C. Shannon.

4161. Zornia diphylla, Pers.

determ. Micheli.
Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4704. Zornia diphylla, Pers.

determ. Micheli.
Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Maj. 1892. Leg. W. C. Shannon.

526. Desmodium affine, Schlecht.

determ. Micheli.
Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

4794. Desmodium albiflorum, Salzm.

determ. Micheli.
Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

529. Desmodium amplifolium, Hemsl.

determ. Micheli.
Cerro de Laguna, Depart. Huehuetenango, Guatemala, alt. 7000 pp.
M. Dec. 1891. Leg. W. C. Shannon.

530. Desmodium amplifolium, Hemsl.

determ. Micheli.
Colotenango, Depart. Huehuetenango, Guatemala, alt. 7000 pp.
M. Dec. 1891. Leg. W. C. Shannon.

1018. Desmodium amplifolium, Hemsl.

determ. Micheli.
Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

4138. Desmodium amplifolium, Hemsl.

Obs. Species *D. strobilaceo* valde affinis.

determ. Micheli.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4140. Desmodium angustifolium, DC.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

528. Desmodium asperum, Desv.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

6106. Desmodium asperum, Desv.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

3714. Desmodium barbatum, Benth. et Œrst.

determ. Micheli.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4155. Desmodium barbatum, Benth. et Œrst.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6107. Desmodium cajanifolium, DC.?

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

984. Desmodium Caripense, G. Don.

(*Hedysarum Caripense*, H. B. K.)

Cum typo in Mus. Reg. Berol. conservato benevole comparavit *Taubert* ill. custos.

Coban, Depart. Alta Verapaz, Guatemala, alt. 4300 pp.

M. Aug. 1886. Leg. von Türckheim.

5197. Desmodium Hondurense, Micheli

in Botan. Gaz. xx. 284.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Apr. 1890. Leg. C. Thieme.

5207. Desmodium Hondurense, Micheli

in Botan. Gaz. xx. 284.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Febr. 1887. Leg. C. Thieme.

524. Desmodium incanum, DC.
determ. Micheli.
Primavera, Depart. Sololá, Guatemala, alt. 760 pp.
M. Jul. 1891. Leg. W. C. Shannon.

3300. Desmodium incanum, DC.
determ. Micheli.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

3572. Desmodium incanum, DC.
determ. Micheli.
Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.
1892. Leg. von Türckheim.

5192. Desmodium incanum, DC.
determ. Micheli.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

2301. Desmodium Nicaraguense, Benth. et Œrst.
Guarda Viejo, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Febr. 1890. Leg. J. D. S.

3686. Desmodium Nicaraguense, Benth. et Œrst.
determ. Micheli.
Rio Paz, Depart. Jutiapa, Guatemala, alt. 1200 pp.
M. Oct. 1892. Leg. W. C. Shannon.

4151. Desmodium Nicaraguense, Benth. et Œrst.
determ. Micheli.
Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

3310. Desmodium orbiculare, Schlecht.
determ. Micheli.
San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3682. Desmodium orbiculare, Schlecht.
determ. Micheli.
Volcan Acatenango, Depart. Zacatepéquez, Guatemala,
alt. 7000 pp.
M. Aug. 1892. Leg. W. C. Shannon.

3317. Desmodium Scorpiurus, Desv.
determ. Micheli.
Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.
M. Mart. 1892. Leg. Heyde et Lux.

6101. Desmodium Scorpiurus, Desv.
determ. Micheli.
Guanagaza, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

2816. Desmodium Skinneri, Benth.
determ. Micheli.
Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

2817. Desmodium Skinneri, Benth.

determ. Micheli.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

3287. Desmodium Skinneri, Benth.

determ. Micheli.

Garrucha, Depart. Chimaltenango, Guatemala, alt. 4500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3751. Desmodium spirale, DC.

determ. Micheli.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

5750. Desmodium spirale, DC.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

6114. Desmodium spirale, DC.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

3279. Desmodium strobilaceum, Cham. et Schl.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3724. Desmodium strobilaceum, Cham. et Schl.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

6117. Desmodium strobilaceum, Cham. et Schl.

determ. Micheli.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4147. Desmodium triflorum, DC.

determ. Micheli.

Arrazola, Depart. Guatemala, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5194. Desmodium triflorum, DC.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 600 pp.

M. Dec. 1888. Leg. C. Thieme.

6116. Desmodium triflorum, DC.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

259. Desmodium uncinatum, DC.

Coban, Depart. Alta Verapaz, Guatemala, alt. 4600 pp.

M. Apr. 1879. Leg. von Türckheim.

3732. Desmodium uncinatum, DC.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4139. Desmodium uncinatum, DC.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4797. Desmodium uncinatum, DC.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1894. Leg. J. D. S.

5751. Desmodium uncinatum, DC.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

6109. Desmodium uncinatum, DC., forma foliolis zona albida notatis.

determ. Micheli.

Las Virgenes, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3757. Desmodium viridiflorum, Beck.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

3860. Desmodium viridiflorum, Beck.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

191. Centrosema hastatum, Benth.

determ. Micheli.

San Martín, Depart. Retalhuleu, Guatemala, alt. 1500 pp.

M. Oct. 1891. Leg. W. C. Shannon.

559. Centrosema Plumieri, Benth.

determ. Micheli.

San Sebastián, Depart. Retalhuleu, Guatemala, alt. 1000 pp.

M. Oct. 1891. Leg. W. C. Shannon.

6318. Centrosema Plumieri, Benth.

determ. Micheli.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

562. Centrosema pubescens, Benth.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

3756. Centrosema pubescens, Benth.

determ. Micheli.

Chupadero, Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

1118. Centrosema Virginianum, Benth.

determ. Micheli.

Depart. Peten, Guatemala.

1889. Leg. R. Walker.

3736. Periandra parviflora, Micheli

in Bull. Herb. Boiss. ii. 444, t. xiv.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5007. Clitoria Guyanensis, Benth.

determ. Micheli.

Volcan Orosí, Prov. Guanacaste, Costa Rica, alt. 1200 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4144. Clitoria Mariana, L.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

556. Clitoria Ternatea, L.

determ. Micheli.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.

M. Sept. 1891. Leg. W. C. Shannon.

3681. Cologania pulchella, H. B. K.

determ. Micheli.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 8500 pp.

M. Aug. 1892. Leg. W. C. Shannon.

3687. Cologania pulchella, H. B. K.

determ. Micheli.

Volcan Flores, Depart. Jutiapa, Guatemala, alt. 2500 pp.

M. Oct. 1892. Leg. W. C. Shannon.

5757. Cologania pulchella, H. B. K.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

6102. Cologania pulchella, H. B. K.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

3743. Cologania pulchella, H. B. K., forma glabrior.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4460. Cologania pulchella, H. B. K., var. rufescens, Micheli.

determ. Micheli.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Sept. 1890. Leg. Heyde et Lux.

3293. Erythrina Corallodendron, L.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5023. Erythrina glauca, Willd.

determ. Micheli.

Lago de Granada, Depart. Rivas, Nicaragua, ait. 120 pp.

M. Apr. 1893. Leg. W. C. Shannon.

6329. Erythrina glauca, Willd.

determ. Micheli.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Jul. 1894. Leg. Heyde et Lux.

3718. Mucuna Andreana, Micheli

in Journ. de Bot. (1892) p. 13.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3742. Calopogonium galactioides, Benth.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4150. Colopogonium cæruleum, Desv.

determ. Micheli.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4156. Calopogonium cæruleum, Desv.

determ. Micheli.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6096. Calopogonium galactioides, Benth.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6134. Calopogonium galactioides, Benth.

determ. Micheli.

Las Marias, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

3713. Galactia canescens, Benth.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3733. Galactia canescens, Benth.

determ. Micheli.

El Pino, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

2809. Galactia marginalis, Benth.

determ. Micheli.

Chinautla, Depart. Guatemala, Guatemala, alt. 4000 pp.

M. Maj. 1892. Leg. J. D. S.

3285. Galactia marginalis, Benth.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4705. Galactia marginalis, Benth.

determ. Micheli.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5199. Dioclea violacea, Benth.?

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1890. Leg. C. Thieme.

548. Canavalia obtusifolia, DC.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3741. Canavalia villosa, Benth.

determ. Micheli.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5762. Canavalia villosa, Benth.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5763. Canavalia villosa, Benth.

determ. Micheli.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1887. Leg. A. Alfaro.

541. Phaseolus anisotrichus, Schlecht.

determ. Micheli.

Amatenango, Depart. Huehuetenango, Guatemala, alt. 7000 pp.

M. Dec. 1891. Leg. W. C. Shannon.

3754. Phaseolus anisotrichus, Schlecht.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3316. Phaseolus atropurpureus, DC.

determ. Micheli.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.

M. Mart. 1892. Leg. Heyde et Lux.

565. Phaseolus Caracalla, L.

determ. Micheli.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

3730. Phaseolus dysophyllus, Benth.

determ. Micheli.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4170. Phaseolus dysophyllus, Benth.

determ. Micheli.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

3749. Phaseolus heterophyllus, H. B. K.

determ. Micheli.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3678. Phaseolus leptostachyus, Benth.

determ. Micheli.

Volcan Flores, Depart. Jutiapa, Guatemala, alt. 2500 pp.

M. Oct. 1892. Leg. W. C. Shannon.

6121. Phaseolus leptostachyus, Benth.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

3573. Phaseolus linearis, H. B. K.?

determ. Micheli.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

5022. Phaseolus linearis, H. B. K.?

determ. Micheli.

Rio Sapoá, Prov. Guanacaste, Costa Rica, alt. 500 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4168. Phaseolus lunatus, L.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4171. Phaseolus lunatus, L.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

6124. Phaseolus lunatus, L.

determ. Micheli.

El Pino, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

1017. Phaseolus multiflorus, Willd.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

3683. Phaseolus multiflorus, Willd.

determ. Micheli.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 8000 pp.

M. Aug. 1892. Leg. W. C. Shannon.

4167. Phaseolus multiflorus, Willd.

determ. Micheli.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6130. Phaseolus multiflorus, Willd.

determ. Micheli.

Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

567. Phaseolus speciosus, H. B. K.

determ. Micheli.

Colotenango, Depart. Huehuetenango, Guatemala, alt. 5210 pp.

M. Dec. 1891. Leg. W. C. Shannon.

2814. Phaseolus speciosus, H. B. K.

determ. Micheli.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4600 pp.

M. Mart. 1892. Leg. J. D. S.

3307. Phaseolus speciosus, H. B. K.

determ. Micheli.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4464. Phaseolus speciosus, H. B. K.

determ. Micheli.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1890. Leg. Heyde et Lux.

5203. Phaseolus speciosus, H. B. K., forma foliis glabrioribus.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Dec. 1887. Leg. C. Thieme.

4149. Vigna vexillata, Benth.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

563. Pachyrhizus angulatus, DC.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

564. Pachyrhizus angulatus, DC.

determ. Micheli.

San Francisco, Depart. Suchitepéquez, Guatemala, alt. 1400 pp.

M. Sept. 1891. Leg. W. C. Shannon.

3306. Pachyrhizus angulatus, DC.

determ. Micheli.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3729. Pachyrhizus angulatus, DC.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5205. Pachyrhizus angulatus, DC.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jan. 1887. Leg. C. Thieme.

3759. Pachyrhizus palmatilobus, Benth.

Obs. P. angulatus et P. palmatilobus vix satis distincti videntur.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4458. Cajanus Indicus, Spreng.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892 Leg. Heyde et Lux.

4795. Cajanus Indicus, Spreng.

determ. Micheli.

Guandú incolarum.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4132. Rhynchosia longeracemosa, Mart. et. Gal.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5761. Rhynchosia longeracemosa, Mart. et Gal.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4141. Rhynchosia macrocarpa, Benth.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala. alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3318. Rhynchosia minima, DC.

determ. Micheli.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3734. Rhynchosia minima, DC.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

6100. Rhynchosia minima, DC.

determ. Micheli.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

5200. Rhynchosia precatoria, DC.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Maj. 1888. Leg. C. Thieme.

3721. Eriosema diffusum, G. Don.

determ. Micheli.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4135. Eriosema diffusum, G. Don.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3302. Eriosema pulchellum, G. Don.

determ. Micheli.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3295. Dalbergia variabilis, Vog.

determ. Micheli.

Ebano incolarum.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4466. Drepanocarpus lunatus, Mey.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4467. Drepanocarpus lunatus, Mey.

determ. Micheli.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

4143. Lonchocarpus Guatemalensis, Benth.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

3289. Lonchocarpus sericeus, H. B. K.

determ. Micheli.

Cocorocho incolarum.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

6328. Lonchocarpus L. sericei, H. B. K., affinis.

determ. Micheli.

Mataquesquintla, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Mart. 1894. Leg. Heyde et Lux.

4468. Lonchocarpus violaceus, H. B. K.

determ. Micheli.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

6330. Lonchocarpus.

Obs. E. serie L. punctatorum, Benth.; cum nulla specie congruit; specimina vix evoluta accuratius non describenda.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Jan. 1894. Leg. Heyde et Lux.

2815. Piscidia Erythrina, L.

determ. Micheli.

Naranjo, Depart. Escuintla, Guatemala, alt. 300 pp.

M. Mart. 1892. Leg. J. D. S.

2823. Andira excelsa, H. B. K.

determ. Micheli.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Febr. 1892. Leg. J. D. S.

5025. Andira excelsa, H. B. K.

determ. Micheli.

Rio Limón, Lago de Granada, Depart. Rivas, Nicaragua, alt. 140 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5760. Sophora tomentosa, L.

Arco incolarum.

determ. Micheli.

Aténas, Prov. Alajuela, Costa Rica, alt. 2100 pp.

M. Mart. 1888. Leg. A. Rojas.

6326. Sophora tomentosa, L.

determ. Micheli.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

2824. Swartzia grandiflora, Willd.

determ. Micheli.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

2826. Swartzia grandiflora, Willd.

determ. Micheli.

Rio Sis, Depart. Suchitepéquez, Guatemala, alt. 1300 pp.

M. Apr. 1892. Leg. J. D. S.

2828. Cæsalpinia exostemma, DC.

determ. Micheli.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. J. D. S.

3297. Cæsalpinia exostemma, DC.

determ. Micheli.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

102. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

554. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

2829. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

Cuyotenango, Depart. Suchitepéquez, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

3282. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5185. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1887. Leg. C. Thieme.

5752. Cæsalpinia pulcherrima, Sw.

determ. Micheli.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Dec. 1888. Leg. A. Alfaro.

6332. Parkinsonia aculeata, L.

determ. Micheli.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

577. Cassia bacillaris, L.

determ. Micheli.

San Andrés, Depart. Retalhuleu, Guatemala, alt. 1400 pp.

M. Oct. 1891. Leg. W. C. Shannon.

3283. Cassia bicapsularis, L.

determ. Micheli.

Santa Teresa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4163. Cassia bicapsularis, L.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2830. Cassia biflora, L.

determ. Micheli.

La Corona, Depart. Guatemala, Guatemala, alt. 4800 pp.

M. Febr. 1892. Leg. J. D. S.

4175. Cassia biflora, L.?

Obs. Species imprimis variabilis; hoc specimen varietatem parvifoliam verisimiliter præbet.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5191. Cassia biflora, L.?

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Febr. 1885. Leg. C. Thieme.

6113. Cassia biflora, L.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4176. Cassia corymbosa, Lam.?

Obs. Specimen junius ad hanc speciem, cujus area geographica in America merid. extratropicali potius extensa est, dubitatim referro.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3711. Cassia flavicoma, H. B. K.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

1036. Cassia foliolosa, Benth.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

3312. Cassia grammica, Spreng.

determ. Micheli.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

6133. Cassia grammica, Spreng.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5029. Cassia grandis, L.

determ. Micheli.

Rio Láure, Depart. Choluteca, Honduras, alt. 0 pp.

M. Febr. 1893. Leg. W. C. Shannon.

3320. Cassia hispidula, Vahl.

determ. Micheli.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3712. Cassia lævigata, Willd.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4158. Cassia leiophylla, Vog.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5189. Cassia leiophylla, Vog.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jan. 1887. Leg. C. Thieme.

1028. Cassia mimosoides, L.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

4154. Cassia mimosoides, L.

determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5212. Cassia mimosoides, L.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Dec. 1888. Leg. C. Thieme.

575. Cassia occidentalis, L.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

4136. Cassia occidentalis, L.

determ. Micheli.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3719. Cassia oxyphylla, Kunth.

determ. Micheli.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4115. Cassia oxyphylla, Kunth.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5188. Cassia oxyphylla, Kunth.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Aug. 1888. Leg. C. Thieme.

4169. Cassia patellaria, DC.?

Obs. A *C. patellaria* differt glandula petiolari stipitata nec depressa; an sp. distincta? determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5031. Cassia reticulata, Willd.

determ. Micheli.

Ilopango, Depart. San Salvador, Salvador, alt. 2060 pp.

M. Dec. 1892. Leg. W. C. Shannon.

6115. Cassia reticulata, Willd.

determ. Micheli.

Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3684. Cassia Skinneri, Benth.

Obs. Legumen (in descriptione Bentham vix notum) planum, compressum, ad suturas vix incrassatas leviter sinuatum, puberus, inter semina septatum, 5–6 poll. longum. determ. Micheli.

Jutiapa, Depart. Jutiapa, Guatemala, alt. 1200 pp.

M. Oct. 1892. Leg. W. C. Shannon.

6327. Cassia spectabilis, DC.

determ. Micheli.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

5766. Cassia stenocarpa, Vog.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

546. Cassia Tagera, L.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

1224. Cassia Tagera, L.

determ. Micheli.

Palmilla, Depart. Zacapa, Guatemala.

1887. Leg. R. Walker.

3571. Cassia Tagera, L.

determ. Micheli.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

3726. Cassia Tagera, L.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5184. Bauhinia Cumanensis, H. B. K.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Oct. 1887. Leg. C. Thieme.

533. Bauhinia inermis, Pers.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

6324. Bauhinia microphylla, Vog.?

Obs. Affinis sed distincta; differt imprimis foliolis. Specimina juniora accuratius non determinanda. determ. Micheli.

Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

5183. Bauhiniæ sp. nov. e. Sect. Casparya.

Obs. Specimina manca; ad nullam aliam speciem pertinent; accurate difficile describenda. determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 600 pp.

M. Jan. 1889. Leg. C. Thieme.

535. Tamarindus Indica, L.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

2811. Tamarindus Indica, L.

determ. Micheli.

Cuyotenango, Depart. Suchitepéquez, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

6317. Tamarindus Indica, L.

determ. Micheli.

Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

6295. Entada polystachya, DC.

Las Marías, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6322. Entada polystachya, DC.

determ. Micheli.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Jul. 1894. Leg. Heyde et Lux.

3294. Mimosa asperata, L.

determ. Micheli.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4134. Mimosa asperata, L.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

586. Mimosa asperata, L.,

forma minor, minus pubescens; vix varietas speciei.

determ. Micheli.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

3308. Mimosa floribunda, Willd.

determ. Micheli.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux

5215. Mimosa floribunda, Willd.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Dec. 1888. Leg. C. Thieme.

5764. Mimosa floribunda, Willd.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

6118. Mimosa floribunda, Willd.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

585. Mimosa invisa, Mart.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

6105. Mimosa invisa, Mart.

determ. Micheli.

Pueblo Ralo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5219. Mimosa pudica, L.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Nov. 1888. Leg. C. Thieme.

5767. Mimosa pudica, L.

determ. Micheli.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

3758. Mimosa Skinneri, Benth.

determ. Micheli.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

6132. Mimosa Skinneri, Benth.

determ. Micheli.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6104. Mimosa somnians, Humb. et Bonpl.

determ. Micheli.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4133. Mimosa Velloziana, Benth.

determ. Micheli.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6126. Leucæna esculenta, Benth.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

5032. Leucæna *L. glaucæ*, Benth., affinis.

Obs. A L. glauca differt imprimis foliolis paucioribus et multo majoribus; verisimiliter species nova, sed specimine unico vix evoluto accuratius non describenda. determ. Micheli.

Cojutepeque, Depart. Cuscutlan, Salvador, alt. 2800 pp.

M. Dec. 1892. Leg. W. C. Shannon.

3292. Acacia Farnesiana, Willd.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5211. Acacia Farnesiana, Willd.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Dec. 1888. Leg. C. Thieme.

584. Acacia filicina, Willd.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

1045. Acacia filicina, Willd.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Rosalío Gómez.

3739. Acacia filicina, Willd.

determ. Micheli.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3298. Acacia pennatula, Benth.

determ. Micheli.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

2834. Acacia polyphylla, DC.,
var. pubescens, Micheli.

determ. Micheli.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

578. Acacia spadicigera, Cham. et Schl.

determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3299. Acacia spadicigera, Cham. et Schl.

determ. Micheli.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5216. Acacia sphærocephala, Cham. et Schl.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1888. Leg. C. Thieme.

6331. Acaciæ sp. nov.?

Obs. Specimina juniora vix evoluta ad A. filicifoliam petiolo eglanduloso accedunt, sed calyce majore, ovario stipitato, foliolis majoribus discoloribus &c. distincta. determ. Micheli.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Jan. 1894. Leg. Heyde et Lux.

5218. Lysiloma Acapulcensis, Benth.?

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1890. Leg. C. Thieme.

6333. Lysiloma Acapulcensis, Benth.

determ. Micheli.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Jul. 1894. Leg. Heyde et Lux.

3303. Calliandra Caracasana, Benth.

determ. Micheli.

Arrazola, Depart. Guatemala, Guatemala, alt. 5500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3740. Calliandra formosa, Benth.

determ. Micheli.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Aug. 1892. Leg. Heyde et Lux.

1049. Calliandra grandiflora, Benth.

determ. Micheli.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

3761. Calliandra grandiflora, Benth.

Obs. Notis quibusdam ad C. Houstoni, Benth., pertinet, sed pinnis numerosioribus distincta. determ. Micheli.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

2835. Calliandra grandiflora, Benth.,
forma typica.

determ. Micheli.

Chinautla, Depart. Guatemala, Guatemala, alt. 4000 pp.
M. Maj. 1892. Leg. J. D. S.

2836. Calliandra grandiflora, Benth.,
forma pubescens.

determ. Micheli.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
M. Febr. 1892. Leg. J. D. S.

3304. Calliandra grandiflora, Benth.,
forma pubescens.

determ. Micheli.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

545. Calliandra Magdalena, Benth.

determ. Micheli.

Petalúl, Depart. Sololá, Guatemala, alt. 1300 pp.
M. Aug. 1891. Leg. W. C. Shannon.

4463. Calliandra Portoricensis, Benth.

determ. Micheli.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Apr. 1893. Leg. Heyde et Lux.

4148. Calliandra Portoricensis, Benth.,
var. multijuga, Micheli

in Botan. Gaz. xx. 285.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

6098. Calliandra Portoricensis, Benth.,
var. multijuga, Micheli

in Botan. Gaz. xx. 285.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

3288. Calliandra tergemina, Benth.

determ. Micheli.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5214. Calliandra tergemina, Benth.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1889. Leg. C. Thieme.

2831. Pithecolobium floribundum, Benth.?

determ. Micheli.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5208. Pithecolobium insigne, Micheli

in Botan. Gaz. xx. 285.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1890. Leg. C. Thieme.

5210. Pithecolobium ligustrinum, Klotzsch.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1890. Leg. C. Thieme.

2833. Pithecolobium Saman, Benth.

determ. Micheli.

San José, Depart. Escuintla, Guatemala, alt. 0 pp.

M. Apr. 1892. Leg. J. D. S.

2832. Pithecolobium Unguis-Cati, Benth.

determ. Micheli.

San José, Depart. Escuintla, Guatemala, alt. 0 pp.

M. Apr. 1892. Leg. J. D. S.

5028. Pithecolobium Unguis-Cati, Benth.

determ. Micheli.

San Pedro, Depart. Choluteca, Honduras, alt. 140 pp.

M. Febr. 1893. Leg. W. C. Shannon.

4470. Enterolobium Schomburgkii, Benth.

Guanacaste incolarum.

determ. Micheli.

Rio Dieguez, Depart. Guatemala, Guatemala, alt. 4000 pp.

M. Jun. 1893. Leg. Heyde et Lux.

2825. Inga capitata, Desv.

determ. Micheli.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

3280. Inga cordistipula, Benth.

Paternos incolarum.

determ. Micheli.

Barberena, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jul. 1892. Leg. Heyde et Lux.

6122. Inga cordistipula, Benth.

Paternos incolarum.

determ. Micheli.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

3319. Inga disticha, Mart.

determ. Micheli.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3727. Inga edulis, Mart.

determ. Micheli.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

6095. Inga insignis, Kunth.

determ. Micheli.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

2819. Inga Jinicuil, Schlecht.

determ. Micheli.

Chinautla, Depart. Guatemala, Guatemala, alt. 4000 pp.

M. Maj. 1892. Leg. J. D. S.

3309. Inga Jinicuil, Schlecht.

determ. Micheli.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5209. Inga leptoloba, Schlecht.

determ. Micheli.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Mart. 1890. Leg. C. Thieme.

6094. Inga leptoloba, Schlecht.

determ. Micheli.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

557. Inga micradenia, Spruce.

determ. Micheli.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

2820. Inga stipularis, DC.?

determ. Micheli.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

2822. Inga vera, Willd.

determ. Micheli.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

3290. Inga vera, Willd.

Cuje incolarum.

determ. Micheli.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5034. Hirtella racemosa, Lam.

Hacienda Animas, Prov. Guanacaste, Costa Rica, alt. 500 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5221. Hirtella racemosa, Lam.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

4767. Rubus adenotrichos, Cham. et Schl.

determ. Focke.
Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7000 pp.
M. Mart. 1894. Leg. J. D. S.

5732. Rubus Costaricensis, Liebm.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

4474. Rubus floribundus, H. B. K.,
forma laxiflora.

determ. Focke.
Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Maj. 1893. Leg. Heyde et Lux.

4472. Rubus floribundus, H. B. K.,
forma pauciflora.

determ. Focke.
Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux

4473. Rubus floribundus, H. B. K.,
forma pauciflora.

determ. Focke.
Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4768. Rubus urticæfolius, Poir.
(*R. trichomallus*, Cham. et Schl.)

determ. Focke.
Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.
M. Mart. 1894. Leg. J. D. S.

4773. Alchemilla sibbaldiæfolia, H. B. K.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

4769. Acæna elongata, L.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 9000 pp.
M. Mart. 1894. Leg. J. D. S.

4772. Osteomeles pernettyoides, Decne.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7000 pp.
M. Mart. 1894. Leg. J. D. S.

5733. Bryophyllum calycinum, Salisb.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

5039. Combretum argenteum, Bertol.

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.
M. Jan. 1893. Leg. W. C. Shannon.

5038. Combretum farinosum, H. B. K.

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.
M. Jan. 1893. Leg. W. C. Shannon.

4267. Gyrocarpus Americanus, Jacq.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4408. Gyrocarpus Americanus, Jacq.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

6144. Gyrocarpus Americanus, Jacq.

Las Marías, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1893. Leg. Heyde et Lux.

3961. Psidium Guajava, L.

Chiquimulilla, Depart. Santa Rosa, Guatemala, alt. 200 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4427. Psidium Guajava, L.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

4879. Myrtus Warczewiczii, Benth. et Hook.

(*Ugni Warscewiczii*, Berg.)

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.
M. Mart. 1894. Leg. J. D. S.

5004. Couroupita Nicaraguensis, DC.

Rio Ochomojo, Depart. Rivas, Nicaragua, alt. 170 pp.
M. Mart. 1893. Leg. W. C. Shannon.

5035. Centradenia Bernoullii, Cario in herb.

determ. Cogniaux.
Cojutepeque, Depart. Cuscatlán, Salvador, alt. 2800 pp.
M. Febr. 1893. Leg. W. C. Shannon.

1470. Centradenia floribunda, Planch.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.
M. Apr. 1892. Leg. J. D. S.

4181. Centradenia floribunda, Planch.

determ. Cogniaux.
Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5229. Centradenia floribunda, Planch.

determ. Cogniaux.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Apr. 1889. Leg. C. Thieme.

4778. Centradenia inæquilateralis, G. Don.

determ. Cogniaux.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

4780. Arthrostemma campanulata, Triana.

determ. Cogniaux.

Rio Turrialba, Prov, Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

2653. Arthrostemma fragile, Lindl.

determ. Cogniaux.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

4182. Tibouchina Bourgæana, Cogn.

in Botan. Gaz. xvi. 4.

determ. Cogniaux.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4777. Tibouchina longifolia, Baill.

determ. Cogniaux.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4779. Tibouchina longifolia, Baill.

determ. Cogniaux.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

5231. Tibouchina longifolia, Baill.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Febr. 1887. Leg. C. Thieme.

4791. Aciotis paludosa, Triana.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4785. Monochætum Hartwegianum, Naud.

determ. Cogniaux.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

5744. Monochætum rivulare, Naud.

determ. Cogniaux.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5745. Monochætum rivulare, Naud.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Oct. 1888. Leg. A. Alfaro.

4788. Triolena hirsuta, Triana.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4787. Leandra dichotoma, Cogn.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5740. Conostegia Cooperi, Cogn.

in DC. Monogr. Phan. vii. 705.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

5741. Conostegia Donnell-Smithii, Cogn.

in DC. Monogr. Phan. vii. 700.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4783. Conostegia lanceolata, Cogn.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 156.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Mart. 1894. Leg. J. D. S.

4784. Conostegia lanceolata, Cogn.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 156.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.

M. Apr. 1894. Leg. J. D. S.

5236. Conostegia Xalapensis, D. Don.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Jun. 1888. Leg. C. Thieme.

4790. Miconia cuneata, Triana.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4781. Miconia impetiolaris, D. Don.

Nomen vulgare *Hoja de Pasma.*

determ. Cogniaux.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4782. Miconia impetiolaris, D. Don.

Nomen vulgare *Hoja de Pasma.*

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5230. Miconia impetiolaris, D. Don.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 700 pp.

M. Febr. 1889. Leg. C. Thieme.

5234. Miconia lacera, Naud.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Aug. 1888. Leg. C. Thieme.

4776. Miconia nervosa, Triana.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5235. Miconia stenostachya, DC.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Maj. 1888. Leg. C. Thieme.

5233. Clidemia hirta, D. Don.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Mart. 1887. Leg. C. Thieme.

3769. Clidemia laxiflora, Walp.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892 Leg. Heyde et Lux.

4789. Clidemia radicans, Cogn.

in Botan. Gaz. xx. 288.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5232. Clidemia rubra, Mart.,

var. biacuta, Naud.

determ. Cogniaux.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Febr. 1887. Leg. C. Thieme.

4775. Ossæa diversifolia, Cogn.

determ. Cogniaux.

Atirro. Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

4786. Blakea gracilis, Hemsl.

Herrán, Prov. San José, Costa Rica, alt. 3600 pp.

M. Apr. 1894. Leg. J. D. S.

5742. Blakea gracilis, Hemsl.

Catarina incolarum.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1888. Leg. Juan J. Cooper.

4792. Topobea Maurofernandeziana, Cogn.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 170.
determ. Cogniaux.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4793. Topobea Maurofernandeziana, Cogn.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 170.
determ. Cogniaux.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

3339. Cuphea Balsamona, Cham. et Schl.

determ. Koehne.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4808. Cuphea Balsamona, Cham. et Schl.

determ. Koehne.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

5738. Cuphea Balsamona, Cham. et Schl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5223B. Cuphea calophylla, Cham. et Schl.,

var. orthodisca, Koehne.

determ. Koehne.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1887. Leg. C. Thieme.

4807. Cuphea epilobiifolia, Koehne,

var. canescens, Koehne

in Botan. Gaz. xx. 4.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4480. Cuphea Heydei, Koehne

in Botan. Gaz. xix. 256.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Maj. 1891. Leg. Heyde et Lux.

4805. Cuphea Infundibulum, Koehne.

determ. Koehne.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4809. Cuphea utriculosa, Koehne,

var. Donnell-Smithii, Koehne

in Botan. Gaz. xviii. 203.

Rio Varilla, Prov. San José, Costa Rica, alt. 3200 pp.

M. Mart. 1894. Leg. J. D. S.

5224B. Cuphea utriculosa, Koehne,

var. *a*.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Maj. 1888. Leg. C. Thieme.

2514. Cuphea utriculosa, Koehne,

var. *a*, sed rami ut in var. *β*. vestiti.

determ. Koehne.

Chinautla, Depart. Guatemala, Guatemala, alt. 4000 pp.

M. Maj. 1892. Leg. J. D. S.

5737. Cuphea Wrightii, A. Gray.

determ. Koehne.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5739. Cuphea Wrightii, A. Gray,
var. microstyla, Koehne.

determ. Koehne.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

5770. Jussiæa Peruviana, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

2995[B]. Jussiæa pilosa, H. B. K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5222[B]. Jussiæa pilosa, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1887. Leg. C. Thieme.

4800. Œnothera cuprea, Schlecht.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. F. N. Cox.

443. Œnothera rosea, Ait.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.

M. Mart. 1892. Leg. W. C. Shannon.

4706. Œnothera rosea, Ait.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5769. Œnothera rosea, Ait.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

356. Œnothera Walpersii, Donnell Smith.
(*O. micrantha*, Walp., nec Hornem.)

Obs. Quum nomen *O. micrantha* in libris iam inveniatur, speciei nomen adhibeatur novum oportet.

Patzicia, Depart. Chimaltenango, Guatemala, alt. 6500 pp.

M. Apr. 1892. Leg. W. C. Shannon.

3001. Fuchsia arborescens, Sims.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4804. Fuchsia corymbiflora, Ruiz et Pav.
In hortis culta.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1894. Leg. J. D. S.

1305. Fuchsia microphylla, H. B. K.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Febr. 1892. Leg. J. D. S.

4803. Fuchsia microphylla, H. B. K.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8,000 pp.

M. Mart. 1894. Leg. J. D. S.

4479. Hauya elegans, Moc. et Sess.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4801. Hauya Rodriguezii, Donnell Smith

in Bótan. Gaz. xviii. 3.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.

M. Apr. 1894. Leg. J. D. S.

262. Lopezia hirsuta, Jacq.

San Martín, Depart. Quezaltenango, Guatemala, alt. 8140 pp.

M. Dec. 1891. Leg. W. C. Shannon.

2948. Lopezia hirsuta, Jacq.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4802. Lopezia hirsuta, Jacq.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

5768. Lopezia hirsuta, Jacq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1888. Leg. Juan J. Cooper.

4337. Lopezia pumila, Bonpl.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

1375. Casearia arguta, H. B. K.?

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Febr. 1892. Leg. J. D. S.

1492. Casearia corymbosa, H. B. K.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

5226. Casearia Javitensis, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1888. Leg. C. Thieme.

1474. Casearia nitida, Jacq.

Caballo Blanco, Depart. Retalhuleu, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

2877. Casearia parvifolia, Willd.,

forma monstrosa.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5228. Casearia ramiflora, Vahl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Aug. 1887. Leg. C. Thieme.

148. Casearia sylvestris, Sw.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

4740. Casearia sylvestris, Sw.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

5111. Casearia sylvestris, Sw.?

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5227. Homalium Hondurense, Donnell Smith

in Botan. Gaz. xx. 4.
San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 600 pp.
M. Sept. 1887. Leg. C. Thieme.

5036. Turnera ulmifolia, L.

Ilopango, Depart. San Salvador, Salvador, alt. 2060 pp.
M. Dec. 1892. Leg. W. C. Shannon.

5037. Turnera ulmifolia, L.

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.
M. Jan. 1893. Leg. W. C. Shannon.

6420. Turnera ulmifolia, L.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

5773. Passiflora adenopoda, DC.

determ. Masters.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

6143. Passiflora adenopoda, DC.

determ. Masters.
Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

6141. Passiflora capsularis, L.

determ. Masters.
Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5242. Passiflora coriacea, Juss.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1888. Leg. C. Thieme.

5247. Passiflora filipes, Benth.

determ. Masters.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Nov. 1887. Leg. C. Thieme.

5244. Passiflora holosericea, L.

determ. Masters.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1888. Leg. C. Thieme.

5245. Passiflora lunata, Willd.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

447. Passiflora macrocarpa, Mast.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

5246. Passiflora membranacea, Benth.

determ. Masters.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1888. Leg. C. Thieme.

4481. Passiflora Mexicana, A. Juss.

determ. Masters.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Nov. 1889. Leg. Heyde et Lux.

4481[B]. Passiflora ornithoura, Mast.

in Botan. Gaz. xvi. 8.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Nov. 1889. Leg. Heyde et Lux.

6334. Passiflora porphyretica, Mast. n. sp. ined.

Jutiapa, Depart. Jutiapa, Guatemala, alt. 1400 pp.
M. Apr. 1894. Leg. Heyde et Lux.

6142. Passiflora rubra, L.

determ. Masters.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5243. Passiflora serratifolia, DC.

determ. Masters.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1889. Leg. C. Thieme.

4810. Passiflora vitifolia, H. B. K.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

4811. Passiflora vitifolia, H. B. K.

determ. Masters.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

2933. Carica Papaya, L.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

5040. Momordica Charantia, L.

determ. Cogniaux.

Tepititlán, Depart. San Vicente, Salvador, alt. 1870 pp.
M. Jan. 1893. Leg. W. C. Shannon.

4818. Pittiera longipedunculata, Cogn.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 175.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

4819. Melothria Fluminensis, Gardn.

determ. Cogniaux.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5249. Anguria diversifolia, Cogn.

in Botan. Gaz. xvi. 10.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1887. Leg. C. Thieme.

4823. Gurania Levyana, Cogn.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4822. Gurania Makoyana, Cogn.

determ. Cogniaux.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5775. Echinocystis Coulteri, Cogn.

determ. Cogniaux.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

2658. Elaterium ciliatum, Cogn.

determ. Cogniaux.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Mart. 1892. Leg. J. D. S.

5774. Elaterium ciliatum, Cogn.

determ. Cogniaux.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Oct. 1887. Leg. A. Alfaro.

4821. Elaterium gracile, Cogn.

determ. Cogniaux.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

4820. Cyclanthera Langæi, Cogn.

determ. Cogniaux.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Mart. 1894. Leg. J. D. S.

4813. Rhypsalis Cassytha, Gaertn.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Apr. 1894. Leg. J. D. S.

4312. Mollugo verticillata, L.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M Jan. 1893. Leg. Heyde et Lux.

5225. Mollugo verticillata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1890. Leg. C. Thieme.

4485. Sanicula Mexicana, DC.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5785. Spananthe paniculata, Jacq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4824. Eryngium Carlinæ, Delar.

Desamparados, Prov. San José, Costa Rica, alt. 3450 pp.
M. Mart. 1894. Leg. J. D. S.

5783. Eryngium Carlinæ, Delar.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5784. Eryngium Carlinæ, Delar.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Oct. 1887. Leg. A. Alfaro.

5254. Eryngium fœtidum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jun. 1887. Leg. C. Thieme.

4484. Tauschia Coulteri, A. Gray?

determ. Rose.
Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Nov. 1890. Leg. Heyde et Lux.

5781. Apium leptophyllum, F. Muell.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

4825. Myrrhidendron Donnell-Smithii, Coult. et Rose in Botan. Gaz. xix. 466, t. xxxii.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,200 pp.
M. Mart. 1894. Leg. J. D. S.

4483. Enantiophylla Heydeana, Coult. et Rose

in Botan. Gaz. xviii. 56, t. v.
Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Nov. 1891. Leg. Heyde et Lux.

5782. Daucus montanus, Willd.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4829. Gilibertia arborea, March.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5253. Gilibertia arborea, March.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Sept. 1888. Leg. C. Thieme.

6336. Gilibertia arborea, March.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.

M. Jan. 1894. Leg. Heyde et Lux.

5786. Oreopanax Œrstedianum, March.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

5787. Oreopanax oligocarpum, Donnell Smith

in Botan. Gaz. xvi. 194.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

3096. Oreopanax Taubertianum, Donnell Smith

in Botan. Gaz. xix. 4.

Ab incolis *Mata Gente* dicitur.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3967. Oreopanax Taubertianum, Donnell Smith

in Botan. Gaz. xix. 4.

Ab incolis *Mata Gente* dicitur.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4343. Oreopanax Taubertianum, Donnell Smith

in Botan. Gaz. xix. 4.

Ab incolis *Mata Gente* dicitur.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4828. Oreopanax Xalapense, Decne. et Planch.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7500 pp.

M. Mart. 1894. Leg. J. D. S.

2665. Oreopanax Xalapense, Decne. et Planch., var. (*O. Thibautii*, Hook. f.)

Volcan de Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

4831. Sambucus bipinnata, Cham. et Schl.

In hortis culta.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

6090. Sambucus bipinnata, Cham. et Schl.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

3162. Viburnum glabratum, H.B.K.

Las Bordes, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Maj. 1892. Leg. Heyde et Lux.

3971. Viburnum glabratum, H.B.K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Aug. 1892. Leg. Heyde et Lux.

3972. Viburnum glabratum, H.B.K.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4830. Viburnum stellato-tomentosum, Hemsl.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

3985. Bouvardia longiflora, H.B.K.

Arrazola, Depart. Guatemala, Guatemala, alt. 6000 pp.
M. Aug. 1892. Leg. Heyde et Lux.

4837. Manettia cuspidata, Bert.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.
M. Apr. 1894. Leg. J. D. S.

5258. Manettia cuspidata, Bert.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Mart. 1887. Leg. C. Thieme.

6341. Coutarea speciosa, Aubl.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.
M. Jan. 1894. Leg. Heyde et Lux.

5264. Calycophyllum candidissimum, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Dec. 1888. Leg. C. Thieme.

4344. Rondeletia cordata, Benth.

Trompetal incolarum.
Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

3163. Rondeletia cordata, Benth.

Trompetal incolarum.
San Siguán, Depart. Quiche, Guatemala, alt. 5800 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5259. Gonzalea Panamensis, Pers.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jul. 1887. Leg. C. Thieme.

5260. Coccocypselum Tontanea, H. B. K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Sept. 1887. Leg. C. Thieme.

3976. Hamelia patens, Jacq.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

5790. Hamelia patens, Jacq.,

var. quinifolia, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5789. Hamelia Xorullensis, H. B. K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4771. Sommera arborescens, Schlecht.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

5262. Posoqueria latifolia, Roem. et Sch.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Apr. 1889. Leg. C. Thieme.

4836. Randia Xalapensis, Mart. et Gal.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1894. Leg. J. D. S.

5794[B]. Randia Xalapensis, Mart. et Gal.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

5261. Coffea Arabica, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Mart. 1888. Leg. C. Thieme.

2748. Palicourea Mexicana, Benth.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.
M. Mart. 1892. Leg. J. D. S.

5796. Cephaelis elata, Sw.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

4833. Cephaelis tomentosa, Vahl.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

5257. Cephaelis tomentosa, Vahl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Febr. 1887. Leg. C. Thieme.

3177. Diodia rigida, Cham. et Schl.

Pueblo Ralo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Maj. 1892. Leg. Heyde et Lux.

4345. Crusea calocephala, DC.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

5288. Crusea calocephala, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1888. Leg. C. Thieme.

184. Spermacoce echioides, H. B. K.

Cuyotenango, Depart. Suchitepéquez, Guatemala, alt. 1100 pp.
M. Oct. 1891. Leg. W. C. Shannon.

5287. Richardsonia scabra, St. Hil.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jun. 1888. Leg. C. Thieme.

2894. Relbunium hypocarpium, Hemsl.

San Miguèl Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4486. Valeriana Mikaniæ, Lindl.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

2924B. Valeriana sorbifolia, H. B. K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

5321. Sparganophorus Vaillantii, Gaertn. ex char.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

2837. Vernonia canescens, H. B. K.

determ. Coulter.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

5839. Vernonia canescens, H. B. K. ex char.

determ. Coulter.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

4867. Vernonia canescens, H. B. K. ex char.

determ. Coulter.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

3422. Vernonia Deppeana, Less.

determ. Coulter.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5840. Vernonia Deppeana, Less.

Tuete incolarum.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

3392. Vernonia Heydeana, Coult.

in Botan. Gaz. xx. 42.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3416. Vernonia leiocarpa, DC.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3423. Vernonia leiocarpa, DC.

determ. Coulter.

Santa Teresa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3421. Vernonia Luxensis, Coult.

in Botan. Gaz. xx. 41.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4524. Vernonia patens, H. B. K.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4215. Vernonia Poeppigiana, DC.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

347. Vernonia Salvinæ, Hemsl.

determ. Coulter.

Coatepeque, Depart. San Márcos, Guatemala, alt. 1490 pp.

M. Jan. 1892. Leg. W. C. Shannon.

4500. Vernonia Schiedeana, Less.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5307. Vernonia Schiedeana, Less.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Febr. 1887. Leg. C. Thieme.

605. Vernonia Shannoni, Coult.

in Botan. Gaz. xx. 42.

San Lorenzo, Depart. San Márcos, Guatemala, alt. 9190 pp.

M. Jan. 1892. Leg. W. C. Shannon.

2839. Vernonia trifloscula, H. B. K.

determ. Coulter.

Caballo Blanco, Depart. Retalhuleu, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

2844. Vernonia trifłosculosa, H. B. K.

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

4514. Vernonia trifłosculosa, H. B. K.

determ. Coulter.

Las Marías, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M Jan. 1893. Leg. Heyde et Lux.

4846. Piptocarpha Costaricensis, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 120.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4863. Piptocarpha Costaricensis, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 120.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

4229. Elephantopus scaber, L.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892 Leg. Heyde et Lux.

5319. Elephantopus scaber, L.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

4714. Elephantopus spicatus, Aubl.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5298. Elephantopus spicatus, Aubl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jan. 1889. Leg. C. Thieme.

5831. Elephantopus spicatus, Aubl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

3399. Piqueria trinervia, Cav.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5811. Piqueria trinervia, Cav.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

600. Ageratum conyzoides, L.

determ. Coulter.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

5323. Ageratum conyzoides, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Apr. 1889. Leg. C. Thieme.

5824. Ageratum conyzoides, L.

Santa Lucía incolarum.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

4228. Ageratum corymbosum, Zucc.

determ. Benth.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4243. Ageratum rugosum, Coult.

in Botan. Gaz. xx. 42.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

6153. Ageratum salicifolium, Hemsl.

determ. Coulter.
Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

3365. Stevia elatior, H. B. K.

determ. Coulter.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jul. 1892. Leg. Heyde et Lux.

3789. Stevia elatior, H. B. K.

determ. Coulter.
Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Sept. 1892. Leg. Heyde et Lux.

3374. Stevia lucida, Lag.

determ. Coulter.
Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4252. Stevia monardæfolia, H. B. K.

determ. Coulter.
Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

6168. Stevia nepetæfolia, H. B. K.

determ. Coulter.
Las Cruces, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

6175. Stevia nepetæfolia, H. B. K.

determ. Coulter.
Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1894. Leg. Heyde et Lux.

1069. Stevia rhombifolia, H. B. K.

determ. Coulter.
Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

613. Stevia salicifolia, Cav.

determ. Coulter.

San Andrés, Depart. Totonicapám, Guatemala, alt. 7800 pp.
M. Nov. 1891. Leg. W. C. Shannon.

1062. Stevia serrata, Cav.

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

3694. Carminatia tenuiflora, DC.

determ. Coulter.

Chingo, Depart. Jutiapa, Guatemala, alt. 1000 pp.
M. Oct. 1892. Leg. W. C. Shannon.

4205. Carminatia tenuiflora, DC.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4248. Eupatorium collinum, DC.

determ. Coulter.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4233. Eupatorium conyzoides, Vahl.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Nov. 1892. Leg. Heyde et Lux.

5322. Eupatorium conyzoides, Vahl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1887. Leg. C. Thieme.

2845. Eupatorium Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 95.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

3406. Eupatorium Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 95.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

3408. Eupatorium Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 95.

Pueblo Ralo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

4528. Eupatorium Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 95.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

3427. Eupatorium Ehrenbergii, Hemsl.

determ. Coulter.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4234. Eupatorium filicaule, Sch. Bip.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4250. Eupatorium griseum, Coult.

in Botan. Gaz. xx. 43.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4206. Eupatorium Guadalupense, Spr.

(*E. paniculatum*, Schrad.—*E. Sinclairii*, Benth.)

determ. Coulter.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4249. Eupatorium hebebotrya, Hemsl.

(*Crytonia hebebotrya*, DC.)

determ. Coulter.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6339. Eupatorium hebebotrya, Hemsl.?

determ. Coulter.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.

M. Jan. 1894. Leg. Heyde et Lux.

4211. Eupatorium ivæfolium, L.

determ. Coulter.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6156. Eupatorium ivæfolium, L.

determ. Coulter.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Sept. 1894. Leg. Heyde et Lux.

2843. Eupatorium leucocephalum, Benth.

determ. Coulter.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

3369. Eupatorium leucocephalum, Benth.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4575. Eupatorium leucocephalum, Benth.

determ. Coulter.

Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4194. Eupatorium pauperculum, A. Gray.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

2840. Eupatorium populifolium, H. B. K.

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

4526. Eupatorium populifolium, H. B. K.

determ. Coulter.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5305. Eupatorium populifolium, H. B. K.

determ. Coulter.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1889. Leg. C. Thieme.

3397. Eupatorium pycnocephalum, Less.

(*E. Schiedeanum*, Schrad.)

determ. Coulter.

Chicamán, Depart. Quiché, Guatemala, alt. 4000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4219. Eupatorium pycnocephalum, Less.

(*E. Schiedeanum*, Schrad.)

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4229. Eupatorium pycnocephalum, Less.

(*E. Schiedeanum*, Schrad.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5835. Eupatorium pycnocephalum, Less.

(*E. Schiedeanum*, Schrad.)

Nomen vulgare *Chirriti*.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

6177. Eupatorium quadrangulare, DC.

determ. Coulter.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Nov. 1894. Leg. Heyde et Lux.

3400. Eupatorium Rafaelense, Coult.

in Botan. Gaz. xvi. 97.

Garrucha, Depart. Chimaltenango, Guatemala, alt. 4500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4523. Eupatorium Rafaelense, Coult.

in Botan. Gaz. xvi. 97.

Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

2842. Eupatorium Schultzii, Sch. Bip.

determ. Coulter.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Febr. 1892. Leg. J. D. S.

4515. Eupatorium Schultzii, Sch. Bip.

determ. Coulter.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 7000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4875. Eupatorium Thieleanum, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 127.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5312. Eupatorium Thieleanum, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 127.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1888. Leg. C. Thieme.

4253. Eupatorium tubiflorum, Benth.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

604. Eupatorium Tuerckheimii, Klatt.

determ. Coulter.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.

M. Mart. 1892. Leg. W. C. Shannon.

3387. Eupatorium Tuerckheimii, Klatt.

determ. Coulter.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4840. Eupatorium Valverdeanum, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 124.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4874. Eupatorium Valverdeanum, Klatt

in Durand et Pittier Prim. Fl. Costar., Fasc. ii. 124.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

4240. Eupatorium vernonioides, Coult.

in Botan. Gaz. xx. 45.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

6167. Eupatorium vernonioides, Coult.

in Botan. Gaz. xx. 45.

Las Cruces, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

4855. Mikania cordifolia, Willd.

determ. Coulter.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.
M. Mart. 1894. Leg. J. D. S.

3430. Mikania globosa, Coult.

in Botan. Gaz. xx. 46.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Mart. 1892. Leg. Heyde et Lux.

3434. Mikania scandens, L.

determ. Coulter.

Ambelice, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

4201. Brickellia Cavanillesii, A. Gray.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

4198. Brickellia diffusa, A. Gray.

determ. Coulter.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5317. Brickellia diffusa, A. Gray.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1889. Leg. C. Thieme.

4844. Brickellia Hartwegii, A. Gray.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Apr. 1894. Leg. J. D. S.

4859. Brickellia Hartwegii, A. Gray.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Apr. 1894. Leg. J. D. S.

4218. Brickellia Pacayensis, Coult.

in Botan. Gaz. xvi. 98.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jan. 1893. Leg. Heyde et Lux.

5302. Egletes viscosa, Less.

determ. Coulter.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1890. Leg. C. Thieme.

3363. Aster Jamaicensis, Sw.

(*Erigeron Jamaicensis*, L.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala. alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3424. Aster spinosus, Benth.

determ. Coulter.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4210. Aster spinosus, Benth.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4870. Aster spinosus, Benth.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

3411. Erigeron Apurensis, Griseb.

(*Conyza Apurensis*, H. B. K.)

determ. Coulter.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4214. Erigeron Apurensis, Griseb.

(*Conyza Apurensis*, H. B. K.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5833. Erigeron Apurensis, Griseb.

(*Conyza Apurensis*, H. B. K.)

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3371. Erigeron Bonariensis, L.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3801. Erigeron Canadensis, L.

determ. Coulter.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

6152. Erigeron Canadensis, L.

determ. Coulter.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1894. Leg. Heyde et Lux.

3398. Erigeron mucronatus, DC.

determ. Coulter.

El Jute, Depart. Quiché, Guatemala, alt. 12,000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4510. Erigeron mucronatus, DC.

determ. Coulter.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Apr. 1890. Leg. Heyde et Lux.

4518. Erigeron mucronatus, DC.

determ. Coulter.

Sabaneta, Depart. Santa Rosa, Guatemala, alt. 6500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

4851. Erigeron mucronatus, DC.

determ. Coulter.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

4516. Erigeron scaposus, DC.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

5833. Erigeron spathulatus, Vahl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3783. Conyza Chilensis, Spreng.

determ. Coulter.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

3378. Conyza coronopifolia, H.B.K.

(*C. hirsuta*, H. B. K.)

determ. Coulter.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4224. Conyza lyrata, H.B.K.

determ. Coulter.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4237. Conyza lyrata, H. B. K.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4512. Conyza sophiæfolia, H.B.K.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

2838. Baccharis glutinosa, Pers.

(*B. cærulescens*, DC.)

determ. Coulter.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. J. D. S.

3362. Baccharis glutinosa, Pers.

(*B. cærulescens*, DC.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jul. 1892. Leg. Heyde et Lux.

3389. Baccharis hirtella, DC.

determ. Coulter.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4251. Baccharis mucronata, H.B.K.

determ. Coulter.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

592. Baccharis rhexioides, H.B.K.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3426. Baccharis rhexioides, H.B.K.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4254. Baccharis rhexioides, H.B.K.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4854. Baccharis rhexioides, H.B.K.

determ. Coulter.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

4866. Baccharis rhexioides, H.B.K.

determ. Coulter.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

5331. Baccharis rhexioides, H.B.K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Oct. 1887. Leg. C. Thieme.

606. Baccharis vaccinioides, H.B.K. ex char.

determ. Coulter.

Serchil, Depart. San Márcos, Guatemala, alt. 8500 pp.

M. Jan. 1892. Leg. W. C. Shannon.

3380. Baccharis vaccinioides, H.B.K. ex char.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4860. Chionolæna lavandulifolium, Benth. et Hook.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.
M. Mart. 1894. Leg. J. D. S.

5821. Gnaphalium attenuatum, DC.

determ. Coulter.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4217. Gnaphalium oxyphyllum, DC.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

3394. Gnaphalium purpureum, L.

determ. Coulter.

Chiniqué, Depart. Quiché, Guatemala, alt. 4600 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4852. Gnaphalium purpureum, L.

determ. Coulter.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

3386. Gnaphalium Sprengelii, Hook. et Arn.

determ. Coulter.

Valle de Quiché, Depart. Quiché, Guatemala, alt. 6700 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4511. Gnaphalium Sprengelii, Hook. et Arn.

determ. Coulter.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.
M. Apr. 1890. Leg. Heyde et Lux.

3431. Gnaphalium Wrightii, A. Gray.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4255. Mallinoa corymbosa, Coult.

in Botan. Gaz. xx. 47, t. v.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4227. Lagascea suaveolens, H.B.K.

(*L. latifolia*, DC.)

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

3158. Elvira Martyni, Cass.

(*E. biflora*, DC.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jun. 1892. Leg. Heyde et Lux.

6297. Elvira Martyni, Cass.

(*E. biflora*, DC.)

determ. Coulter.

Rio La Plata, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3693. Desmanthodium Guatimalense, Hemsl.

determ. Coulter.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 12,000 pp.

M. Aug. 1892. Leg. W. C. Shannon.

2863. Polymnia maculata, Cav.

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

3807. Polymnia maculata, Cav.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M Aug. 1892. Leg. Heyde et Lux.

4509. Polymnia maculata, Cav.

determ. Coulter.

Villa Nueva, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Nov. 1889. Leg. Heyde et Lux.

5827. Polymnia maculata, Cav.?

Tora incolarum.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

6161. Polymnia maculata, Cav.

determ. Coulter.

Las Cruces, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Oct. 1894. Leg. Heyde et Lux.

3375. Polymnia Quichensis, Coult.

in Botan. Gaz. xx. 48.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

590. Baltimora scolospermum, Steetz.

determ. Coulter.

Patalúl, Depart. Sololá, Guatemala, alt. 1300 pp.

M. Aug. 1891. Leg. W. C. Shannon.

2848. Baltimora scolospermum, Steetz.

determ. Coulter.

San José, Depart. Escuintla, Guatemala, alt. 0 pp.

M. Apr. 1892. Leg. J. D. S.

5314. Baltimora scolospermum, Steetz.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Dec. 1888. Leg. C. Thieme.

6165. Baltimora scolospermum, Steetz.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1894. Leg. Heyde et Lux.

595. Melampodium paludosum, H.B.K.

(*M. divaricatum*, DC.)

determ. Coulter.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

2850. Melampodium paludosum, H.B.K.

(*M. divaricatum*, DC.)

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

3359. Melampodium paludosum, H.B.K.

(*M. divaricatum*, DC.)

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Jul. 1892. Leg. Heyde et Lux.

4213. Melampodium paludosum, H.B.K.

(*M. divaricatum*, DC.)

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5296. Acanthospermum hispidum, DC. ex char.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Oct. 1889. Leg. C. Thieme.

3808. Zinnia pauciflora, L.

(*Z. multiflora*, L.)

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5819. Heliopsis buphthalmoides, Dun.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

3384. Siegesbeckia flosculosa, L'Herit.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3395. Jægeria hirta, Less.

(*Spilanthes sessilifolia*, Hemsl.)

determ. Coulter.

Tuluché, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3794. Jægeria hirta, Less.

(*Spilanthes sessilifolia*, Hemsl.)

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5301. Eclipta erecta, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1889. Leg. C. Thieme.

612. Zaluzania resinosa, Watson.

determ. Coulter.

Calél, Depart. Huehuetenango, Guatemala, alt. 8500 pp.

M. Dec. 1891. Leg. W. C. Shannon.

3370. Gymnolomia patens, A. Gray.

determ. Coulter.

San Miguel Uspantán. Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4212. Gymnolomia patens, A. Gray.

determ. Coulter.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4865. Gymnolomia patens, A. Gray.

determ. Coulter.

Rio Virilla, Prov. San José, Costa Rica, alt. 3200 pp.

M. Mart. 1894. Leg. J. D. S.

4871. Gymnolomia patens, A. Gray.

determ. Coulter.

Rio Torrés, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

588. Sclerocarpus divaricatus, Benth. et Hook.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

593. Sclerocarpus divaricatus, Benth. et Hook.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

602. Sclerocarpus divaricatus, Benth. et Hook.
determ. Coulter.
Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

5315. Sclerocarpus divaricatus, Benth. et Hook.?
determ. Coulter.
San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

3419. Sclerocarpus Schiedeanus, Benth. et Hook.?
determ. Coulter.
Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3805. Montanoa hibiscifolia, C. Koch ex char.
determ. Coulter.
Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Oct. 1892. Leg. Heyde et Lux.

6155. Montanoa hibiscifolia, C. Koch ex char.
determ. Coulter.
Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

814. Montanoa Moritziana, Sch. Bip.
determ. Coulter.
Coban, Depart. Alta Verapaz, Guatemala, alt. 4300 pp.
M. Nov. 1885. Leg. von Türckheim.

4216. Montanoa patens, A. Gray.
determ. Coulter.
Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4841. Montanoa patens, A. Gray.
determ. Coulter.
Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

2858. Montanoa Samalensis, Coult.
in Botan. Gaz. xx. 49.
Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.
M. Apr. 1892. Leg. J. D. S.

4242. Montanoa subtruncata, A. Gray.
determ. Coulter.
Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

5324. Montanoa subtruncata, A. Gray.
determ. Coulter.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Febr. 1888. Leg. C. Thieme.

2852. Wedelia filipes, Hemsl.

determ. Coulter.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5809. Wedelia filipes, Hemsl.?

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

,4839. Zexmenia Costaricensis, Benth.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5823. Zexmenia Costaricensis, Benth.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

2854. Zexmenia dulcis, Coult.

in Botan. Gaz. xvi. 99.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Apr. 1892. Leg. J. D. S.

4872. Zexmenia dulcis, Coult.

in Botan. Gaz. xvi. 99.

determ. Coulter.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

4196. Zexmenia elegans, Sch. Bip.

determ. Coulter.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4244. Zexmenia fasciculata, A. Gray.

determ. Coulter.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

3358. Zexmenia Salvinii, Hemsl.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

1075. Zexmenia scandens, Hemsl.

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

596. Tithonia speciosa, Klatt.

determ. Coulter.

San Sebastián, Depart. Retalhuleu, Guatemala, alt. 1000 pp.

M. Oct. 1891. Leg. W. C. Shannon.

5808. Tithonia speciosa, Klatt.

determ. Coulter.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Dec. 1887. Leg. A. Alfaro.

6166. Tithonia speciosa, Klatt.

determ. Coulter.

Las Cruces, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Oct. 1894. Leg. Heyde et Lux.

4204. Tithonia tubæformis, Cass.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2849. Melanthera deltoidea, Michx.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

4226. Melanthera deltoidea, Michx.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4847. Melanthera deltoidea, Michx.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5297. Melanthera hastata, Michx.?

determ. Coulter.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

5829. Melanthera hastata, Michx.?

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3580. Melanthera lanceolata, Benth.

determ. Coulter.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

589. Melanthera oxylepis, DC.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3582. Encelia lagascæformis, A. Gray.

determ. Coulter.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

3396. Encelia Mexicana, Mart.

determ. Coulter.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

6160. Encelia Mexicana, Mart.

determ. Coulter.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1894. Leg. Heyde et Lux.

3385. Verbesina Donnell-Smithii, Coult.

in Botan. Gaz. xx. 50.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4236. Verbesina Fraseri, Hemsl.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2861. Verbesina gigantea, Jacq.

determ. Coulter.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

4238. Verbesina gigantea, Jacq.

determ. Coulter.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892 Leg. Heyde et Lux.

5813. Verbesina gigantea, Jacq.

determ. Coulter.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Febr. 1888. Leg. Juan J. Cooper.

4241. Verbesina leprosa, Klatt ex char.

determ. Coulter.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6176. Verbesina leprosa, Klatt ex char.

determ. Coulter.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Nov. 1894. Leg. Heyde et Lux.

2859. Verbesina pinnatifida, Cav.

determ. Coulter.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Febr. 1892. Leg. J. D. S.

2860. Verbesina Virginica, L.

determ. Coulter.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

5313. Otopappus curviflorus, Hemsl.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Febr. 1889. Leg. C. Thieme.

4235. Otopappus curviflorus, Hemsl., var. glabratus, Coult.

in Botan. Gaz. xx. 50.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2864. Podachænium paniculatum, Benth.

determ. Coulter.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Mart. 1892. Leg. J. D. S.

3429. Podachænium paniculatum, Benth.

determ. Coulter.

Portezuelo, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3381. Spilanthes Beccabunga, DC.

determ. Coulter.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4501. Spilanthes Beccabunga, DC.

determ. Coulter.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1890. Leg. Heyde et Lux.

5309. Spilanthes Beccabunga, DC.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1888. Leg. C. Thieme.

3812. Spilanthes oleracea, Jacq.

determ. Coulter.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4209. Spilanthes ramosa, Hemsl.

determ. Coulter.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

2841. Salmea grandiceps, Cass.

determ. Coulter.

La Corona, Depart. Guatemala, Guatemala, alt. 4800 pp.

M. Febr. 1892. Leg. J. D. S.

3388. Salmea grandiceps, Cass.

determ. Coulter.

Valle de Quiché, Depart. Quiché, Guatemala, alt. 6700 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4869. Salmea grandiceps, Cass.

determ. Coulter.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

2851. Synedrella vialis, A. Gray.

determ. Coulter.

Rio Sis, Depart. Suchitepéquez, Guatemala, alt. 1300 pp.

M. Apr. 1892. Leg. J. D. S.

2853. Synedrella vialis, A. Gray.

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

4709. Synedrella vialis, A. Gray.

determ. Coulter.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5825. Synedrella vialis, A. Gray.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4193. Coreopsis trifoliata, Bertol.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3692. Dahlia coccinea, Cav.

determ. Coulter.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 8500 pp.

M. Aug. 1892. Leg. W. C. Shannon.

1071. Dahlia Merckii, Lehm.

(*D. glabrata*, Lindl.)

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

609. Dahlia variabilis, Desf.

determ. Coulter.

Huahua, Depart. Huehuetenango, Guatemala, alt. 4800 pp.

M. Dec. 1891. Leg. W. C. Shannon.

1070. Dahlia variabilis, Desf.

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Rosalío Gómez.

2857. Dahlia variabilis, Desf.

determ. Coulter.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
M. Febr. 1892. Leg. J. D. S.

4223. Dahlia variabilis, Desf.

determ. Coulter.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jan. 1893. Leg. Heyde et Lux.

608. Cosmos crithmifolius, H.B.K.

determ. Coulter.

Amatenango, Depart. Huehuetenango, Guatemala, alt. 7000 pp.
M. Dec. 1891. Leg. W. C. Shannon.

1073. Bidens Alausensis, H.B.K.?

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

4503. Bidens Alausensis, H.B.K.

determ. Coulter.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Dec. 1889. Leg. Heyde et Lux.

1678. Bidens Andicola, H.B.K.?

determ. Coulter.

Samac, Depart Alta Verapaz, Guatemala, alt. 4600 pp.
M. Apr. 1889. Leg. von Türckheim.

3404. Bidens Andicola, H.B.K.

determ. Coulter.

Valle de Quiché, Depart. Quiché, Guatemala, alt. 6700 pp.
M. Maj. 1892. Leg. Heyde et Lux.

597. Bidens heterophylla, Ort.

determ. Coulter.

San Cárlos, Depart. Quezaltenango, Guatemala, alt. 8620 pp.
M. Dec. 1891. Leg. W. C. Shannon.

1074. Bidens hirtella, H.B.K. ex char.

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

3691. Bidens humilis, H.B.K.

determ. Coulter.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 14,400 pp.
M. Aug. 1892. Leg. W. C. Shannon.

611. Bidens ostruthioides, Sch. Bip.

determ. Coulter.

Calél, Depart. Huehuetenango, Guatemala, alt. 8500 pp.
M. Dec. 1891. Leg. W. C. Shannon.

594. Bidens pilosa, L.
(*B. leucantha*, Willd.)

determ. Coulter.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

601. Bidens pilosa, L.
(*B. leucantha*, Willd.)

determ. Coulter.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

4208. Bidens pilosa, L.
(*B. leucantha*, Willd.)

determ. Coulter.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5304. Bidens pilosa, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Maj. 1889. Leg. C. Thieme.

5814. Bidens pilosa, L.
(*B. leucantha*, Willd.)
Mosote incolarum.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3366. Chrysanthellum procumbens, Rich.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3382. Galinsoga parviflora, Cav.

determ. Coulter.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3432. Galinsoga parviflora, Cav.

determ. Coulter.

Rio de las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

5815. Galinsoga parviflora, Cav.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

4857. Calea axillaris, DC.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

5333. Calea axillaris, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Jan. 1887. Leg. C. Thieme.

3428. Calea integrifolia, Hemsl.

determ. Coulter.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.
M. Maj. 1892. Leg. Heyde et Lux.

5329. Calea integrifolia, Hemsl.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1890. Leg. C. Thieme.

4506. Calea integrifolia, Hemsl., var. dentata, Coult.

in Botan. Gaz. xx. 51.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1890. Leg. Heyde et Lux.

5300. Calea salmæfolia, Hemsl.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Dec. 1888. Leg. C. Thieme.

6159. Calea salmæfolia, Hemsl.

determ. Coulter.

Guanagaza, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1894. Leg. Heyde et Lux.

5822. Calea Zacatechichi, Schlecht.?

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

2846. Tridax procumbens, L.

determ. Coulter.

Chinautla, Depart. Guatemala, Guatemala, alt. 4000 pp.
M. Maj. 1892. Leg. J. D. S.

4200. Tridax procumbens, L.

determ. Coulter.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5308. Tridax procumbens, L.

determ. Coulter.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

3802. Schkuhria anthemoides, Coult.

(*Hopkirkia anthemoides*, DC.—*Schkuhria Hopkirkia*, A. Gray.)

determ. Coulter.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

3364. Galeana hastata, Llav. et Lex.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jul. 1892. Leg. Heyde et Lux.

6338. Porophyllum ruderale, Cass.

determ. Coulter.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4499. Dysodia cancellata, A. Gray.

determ. Coulter.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Nov. 1889. Leg. Heyde et Lux.

4195. Dysodia grandiflora, DC.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

2847. Syncephalanthus decipiens, Bertol.

determ. Coulter.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. J. D. S.

4197. Syncephalanthus decipiens, Bertol.

determ. Coulter.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

1063. Tagetes lucida, Cav.

determ. Coulter.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

1891. Leg. Rosalío Gómez.

3798. Tagetes lucida, Cav.

determ. Coulter.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5816. Tagetes micrantha, Cav.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

3785. Tagetes subulata, Llav. et Lex.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4245. Tagetes subulata, Llav. et Lex.

determ. Coulter.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892 Leg. Heyde et Lux.

598. Tagetes tenuifolia, Cav.

(*T. peduncularis*, Lag. et Rod.)

determ. Coulter.

San Cárlos, Depart. Quezaltenango, Guatemala, alt. 8620 pp.

M. Dec. 1891. Leg. W. C. Shannon.

3412. Tagetes tenuifolia, Cav.
(*T. peduncularis*, Lag. et Rod.)

determ. Coulter.

Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4222. Tagetes tenuifolia, Cav.
(*T. peduncularis*, Lag. et Rod.)

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

5817. Tagetes tenuifolia, Cav.
(*T. peduncularis*, Lag. et Rod.)

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

4507. Pectis canescens, H.B.K.

determ. Coulter.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.

M. Jun. 1890. Leg. Heyde et Lux.

3401. Pectis canescens, H.B.K.,
var. villosior, Coult.

in Botan. Gaz. xx. 52.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3413. Pectis canescens, H.B.K.,
var. villosior, Coult.

in Botan. Gaz. xx. 52.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3806. Pectis elongata, H.B.K.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

3366 B. Pectis prostrata, Cav.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4232. Pectis prostrata, Cav.

determ. Coulter.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

6154. Pectis prostrata, Cav.

determ. Coulter.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1894. Leg. Heyde et Lux.

4850. Helenium Mexicanum, H.B.K.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

4858. Helenium Mexicanum, H.B.K.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Apr. 1894. Leg. J. D. S.

5818. Helenium Mexicanum, H.B.K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

3360. Helenium puberulum, DC.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jul. 1892. Leg. Heyde et Lux.

3403. Helenium puberulum, DC.

determ. Coulter.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3804. Chrysanthemum Parthenium, Bernh.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5805. Chrysanthemum Parthenium, Bernh.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4525. Liabum asclepiadeum, Sch. Bip.

determ. Coulter.

Rio de La Plata, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4225. Liabum discolor, Benth. et Hook.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4868. Liabum polyanthum, Klatt.

determ. Coulter.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

3383. Schistocarpha bicolor, Less.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

2862. Neurolæna lobata, R. Br.

determ. Coulter.

Barranca del Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Apr. 1892. Leg. J. D. S.

5303. Neurolæna lobata, R. Br.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.
M. Apr. 1888. Leg. C. Thieme.

6340. Neurolæna lobata, R. Br.

determ. Coulter.
Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

4247. Erechthites hieracifolia, Raf.

(*E. carduifolia*, DC.)

determ. Coulter.
Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5802. Erechthites prælta, Raf.

determ. Coulter.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

3379. Erechthites runcinata, DC.

determ. Coulter.
Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4502. Erechthites runcinata, DC.

determ. Coulter.
Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.
M. Nov. 1889 Leg. Heyde et Lux.

4498. Erechthites valerianæfolia, DC.

determ. Coulter.
San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Sept. 1891. Leg. Heyde et Lux.

5820. Erechthites valerianæfolia, DC.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

2866. Senecio Berlandieri, Hemsl.

determ. Coulter.
Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.
M. Febr. 1892. Leg. J. D. S.

4853. Senecio Berlandieri, Hemsl.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Apr. 1894. Leg. J. D. S.

3407. Senecio calocephalus, Hemsl.

determ. Coulter.
Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

3373. Senecio Deppeanus, Hemsl.

determ. Coulter.
Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3410. Senecio Deppeanus, Hemsl.

determ. Coulter.

Trapichito, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

2868. Senecio Ghiesbreghtii, Hort. Hal. Reg.

determ. Coulter.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

2869. Senecio Ghiesbreghtii, Hort. Hal. Reg.

determ. Coulter.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Mart. 1892. Leg. J. D. S.

3402. Senecio Ghiesbreghtii, Hort. Hal. Reg.

determ. Coulter.

Sabaneta, Depart. Santa Rosa, Guatemala, alt. 6500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4520. Senecio Ghiesbreghtii, Hort. Hal. Reg.

determ. Coulter.

La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

3368. Senecio Ghiesbreghtii, Hort. Hal. Reg., var. Uspantanensis, Coult.

in Botan. Gaz. xx. 52.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

2867. Senecio grandifolius, Less.

(*S. arborescens*, Steetz.)

determ. Coulter.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

3391. Senecio grandifolius, Less.

(*S. arborescens*, Steetz.)

determ. Coulter.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4862. Senecio multivenius, Benth.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. J. D. S.

5803. Senecio multivenius, Benth.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4861. Senecio Œrstedianus, Benth.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

2870. Senecio Petasites, DC.

determ. Coulter.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.
M. Mart. 1892. Leg. J. D. S.

4522. Senecio Petasites, DC.

determ. Coulter.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

3376. Senecio platanifolius, Benth.

determ. Coulter.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3390. Senecio platanifolius, Benth.

determ. Coulter.

Valle de Quiché, Depart. Quiché, Guatemala, alt. 6700 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3377. Senecio Schumannianus, Schauer ex char.

determ. Coulter.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

2865. Senecio salignus, DC.

determ. Coulter.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

3372. Senecio salignus, DC.

determ. Coulter.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

607. Werneria nubigena, H.B.K.

determ. Coulter.

Volcan Tajumulco, Depart. San Márcos, Guatemala, alt. 12,000 pp.
M. Jan. 1892. Leg. W. C. Shannon.

4513. Cnicus Mexicanus, Hemsl.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Mart. 1893. Leg. Heyde et Lux.

5325. Cnicus Mexicanus, Hemsl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Apr. 1889. Leg. C. Thieme.

5830. Cnicus Mexicanus, Hemsl.

determ. Coulter.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6169. Cnicus Mexicanus, Hemsl.

determ. Coulter.

El Pino, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1894. Leg. Heyde et Lux.

3361. Cnicus subcoriaceus, Hemsl.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Jul. 1892. Leg. Heyde et Lux.

4517. Cnicus subcoriaceus, Hemsl.

determ. Coulter.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Jun. 1893. Leg. Heyde et Lux.

3433. Chaptalia nutans, Hemsl.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

4203. Perezia nudicaulis, A. Gray.

determ. Coulter.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4527. Pereziopsis Donnell-Smithii, Coult.

in Botan. Gaz. xx. 53, t. vi.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Febr. 1893. Leg. Heyde et Lux.

2855. Trixis frutescens, P. Br.

determ. Coulter.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.
M. Maj. 1892. Leg. J. D. S.

2856. Trixis frutescens, P. Br.

determ. Coulter.

Volcan de Fuego, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.
M. Mart. 1892. Leg. J. D. S.

4202. Trixis frutescens, P. Br.

determ. Coulter.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

5326. Trixis frutescens, P. Br.

determ. Coulter.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Apr. 1888. Leg. C. Thieme.

5810. Trixis frutescens, P. Br.

determ. Coulter.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

3581. Hieracium abscissum, Less.?

determ. Coulter.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

3784. Hieracium abscissum, Less. ex char.

determ. Coulter.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

4246. Sonchus oleraceus, L.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4504. Sonchus oleraceus, L.

determ. Coulter.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1889. Leg. Heyde et Lux.

4849. Sonchus oleraceus, L.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

5826. Sonchus oleraceus, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

3393. Pinaropappus roseus, Less.

determ. Coulter.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5845. Burmeistera cyclostigmata, Donnell Smith

in Botan. Gaz. xx. 291.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5844. Centropogon Warscewiczii, Vatke.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4880. Siphocampylus Regelii, Vatke.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 9000 pp.

M. Mart. 1894. Leg. J. D. S.

4881. Siphocampylus thysanopetalus, Vatke.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

6179. Lobelia Cliffortiana, L.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4882. Lobelia laxiflora, H.B.K.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

5846. Lobelia laxiflora, H.B.K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Febr. 1888. Leg. Juan J. Cooper.

5335. Lobelia laxiflora, H.B.K., var. angustifolia, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Apr. 1890. Leg. C. Thieme.

6180. Lobelia ruderalis, Willd.

(*L. micrantha*, H. B. K.—*L. parviflora*, Mart. et Gal.)

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4529. Heterotoma lobelioides, Zucc.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Nov. 1889. Leg. Heyde et Lux

5842. Psammisia symphystemona, Donnell Smith

in Botan. Gaz. xx. 291.

Mariposa, Prov. Alajuela, Costa Rica, alt. 5500 pp.

M. Maj. 1887. Leg. Juan J. Cooper.

5843. Cavendishia complectens, Hemsl.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Maj. 1887. Leg. A. Alfaro.

3184. Cavendishia pubescens, Hemsl.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4532. Cavendishia pubescens, Hemsl.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1891. Leg. Heyde et Lux.

4876. Cavendishia Veraguensis, Klotzsch.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. J. D. S.

4877 B. Vaccinium consanguineum, Klotzsch.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

5847. Sophoclesia major, Benth. et Hook.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4878. Arctostaphylos ledifolia, Mart. et Gal.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

4877. Pernettya coriacea, Klotzsch.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.

M. Mart. 1894. Leg. J. D. S.

5841. Gaultheria odorata, H.B.K.,

var. Costaricensis, Donnell Smith

in Botan. Gaz. xx. 292.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4530. Agarista multiflora, G. Don.

(=n. 837 Ser. iii. ex herb. Bras. Regnell.)

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

6181. Chimaphila maculata, Pursh.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Jun. 1893. Leg. Heyde et Lux.

3567. Clethra lanata, Mart. et Gal.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Jul. 1892. Leg. Heyde et Lux.

4531. Clethra lanata, Mart. et Gal.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Maj. 1891. Leg. Heyde et Lux.

5336. Clethra lanata, Mart. et Gal.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.

M. Aug. 1888. Leg. C. Thieme.

5337. Plumbago scandens, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Febr. 1889. Leg. C. Thieme.

4536. Myrsine myricoides, Schlecht.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4883. Parathesis crenulata, Hook. fil.,

var. ferruginea, Œrst.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4535. Parathesis melanosticta, Hemsl.,

forma majusculiflora.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

3022. Ardisia compressa, H.B.K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

5848. Ardisia compressa, H.B.K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6184. Ardisia compressa, H.B.K.

Canchón, Depart. Santa Rosa, Guatemala. alt. 2000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

4537. Ardisia paschalis, Donnell Smith

in Botan. Gaz. xix. 5, t. i.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

5338. Ardisia paschalis, Donnell Smith

in Botan. Gaz. xix. 5, t. i.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1887. Leg. C. Thieme.

4366. Ardisia revoluta, H.B.K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

369. Ardisia venosa, Mast

in Botan. Gaz. xviii. 205.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.

M, Mart. 1892. Leg. W. C. Shannon.

6183. Lucuma mammosa, Gaertn.

Sapote incolarum.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

6182. Styrax punctatum, DC.

Las Viñas, Santa Rosa, Guatemala, alt. 2000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

2046. Rauwolfia heterophylla, Roem. et Sch.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Mart. 1890. Leg. P. Perales.

2477. Aspidosperma megalocarpon, Muell. Arg.

Chichique incolarum.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

5344. Plumeria acutifolia, Poir.?

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Aug. 1888. Leg. C. Thieme.

2763. Tabernæmontana Donnell-Smithii, Rose

in Botan. Gaz. xviii. 206.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

2765. Tabernæmontana Donnell-Smithii, Rose

in Botan. Gaz. xviii. 206.

San José, Depart. Escuintla, Guatemala, alt. 0 pp.

M. Apr. 1892. Leg. J. D. S.

5042. Stemmadenia mollis, Benth.

Liberia, Prov. Guanacaste, Costa Rica, alt. 400 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4001. Philibertia crassifolia, Hemsl.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5342. Philibertia crassifolia, Hemsl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Sept. 1887. Leg. C. Thieme.

6353. Philibertia odorata, Hemsl.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

3186. Asclepias Curassavica, L.

Rio La Plata, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5853. Asclepias Curassavica, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

4710. Asclepias rosea, H.B.K.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

6348. Metastelma pedunculare, Decne.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

6352. Blepharodon mucronatum, Decne.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.

M. Jan. 1894. Leg. Heyde et Lux.

6349. Enslenia ligulata, Benth.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.

M. Jan. 1894. Leg. Heyde et Lux.

6347. Gonolobus barbatus, H.B.K.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

6354. Gonolobus erianthus, Decne.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

4543. Lachnostoma lasiostemma, Hemsl.

Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

4542. Marsdenia Mexicana, Decne.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

6311. Marsdenia propinqua, Hemsl.

Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

2693. Spigelia Humboldtiana, Cham. et Schl.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Apr. 1892. Leg. J. D. S.

2698. Spigelia Humboldtiana, Cham. et Schl.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

3997. Spigelia Humboldtiana, Cham. et Schl.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5351. Spigelia Humboldtiana, Cham. et Schl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Aug. 1887. Leg. C. Thieme.

5850. Spigelia splendens, Wendl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

5350. Buddleia Americana, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Jan. 1889. Leg. C. Thieme.

5851. Buddleia Americana, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

5852. Buddleia floccosa, Kunth.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4371. Erythræa divaricata, Schaffn.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4887. Erythræa divaricata, Schaffn.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Apr. 1894. Leg. J. D. S.

4888. Halenia multiflora, Benth.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 9000 pp.

M. Mart. 1894. Leg. J. D. S.

4711. Limnanthemum Humboldtianum, Griseb.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5398. Lœselia ciliata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Mart. 1889. Leg. C. Thieme.

6214. Lœselia ciliata, L.

Las Virgenes, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Oct. 1894. Leg. Heyde et Lux.

2881. Lœselia glandulosa, G. Don.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.
M. Mart. 1892. Leg. Heyde et Lux.

4357. Lœselia glandulosa, G. Don.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4886. Lœselia glandulosa, G. Don.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

4891. Wigandia Caracasana, H.B.K.

Ortiga incolarum.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Apr. 1894. Leg. J. D. S.

5352. Wigandia Caracasana, H.B.K.,

forma viscosa.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Sept. 1888. Leg. C. Thieme.

2137. Nama Jamaicense, L.

Dueñas, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.
M. Apr. 1890. Leg. J. D. S.

5353. Hydrolea spinosa, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

5043. Cordia alba, Roem. et Schult.

Socorro, Depart. San Vicente, Salvador, alt. 160 pp.
M. Jan. 1893. Leg. W. C. Shannon.

5854. Cordia ferruginea, Roem. et Sch.

(*C. riparia*, H. B. K.?)

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5044. Cordia Gerascanthus, Jacq.

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.
M. Jan. 1893. Leg. W. C. Shannon.

5354. Cordia Gerascanthus, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.
M. Mart. 1889. Leg. C. Thieme.

6194. Cordia Gerascanthus, Jacq.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3311. Bourreria grandiflora, Bertol.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

6357. Bourreria grandiflora, Bertol.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4890. Tournefortia bicolor, Sw.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5358 B. Tournefortia hirsutissima, L.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 1200 pp.

M. Apr. 1887. Leg. C. Thieme.

2472. Heliotropium Indicum, L.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5358. Heliotropium Indicum, L.

Rio Permejo, Depart. Santa Bárbara, Honduras.

M. Apr. 1887. Leg. C. Thieme.

362. Echinospermum Mexicanum, Hemsl.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.

M. Mart. 1892. Leg. W. C. Shannon.

3629. Lithospermum distichum, Ort.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.

M. Jun. 1892. Leg. W. C. Shannon.

5118. Maripa Nicaraguensis, Hemsl.

Jiménes, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

415. Ipomœa arborescens, G. Don.

Cuilco, Depart. Huehuetenango, Guatemala, alt. 3800 pp.

M. Dec. 1891. Leg. W. C. Shannon.

4355. Ipomœa cissoides, Griseb.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5364. Ipomœa coccinea, L.,

var. hederifolia, A. Gray.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Mart. 1887. Leg. C. Thieme.

414. Ipomœa fastigiata, Sweet.

San Andrés, Depart. Retalhuleu, Guatemala, alt. 1400 pp.

M. Oct. 1891. Leg. W. C. Shannon.

5045. Ipomœa fastigiata, Sweet.

Volcan Orosí, Prov. Guanacaste, Costa Rica, alt. 1200 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5046. Ipomœa fistulosa, Mart., var. Nicaraguensis, Donnell Smith

in Botan. Gaz. xix. 256.

Rio de Las Lajas, Depart. Rivas, Nicaragua, alt. 120 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5858. Ipomœa Purga, Hayne.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Oct. 1887. Leg. A. Alfaro.

5362. Ipomœa umbellata, G.F.W.Meyer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Jan. 1889. Leg. C. Thieme.

6343. Jacquemontia pungens, A. Gray.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

268. Jacquemontia violacea, Choisy.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

4026. Convolvulus minutiflorus, Mart. et Gal.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. W. C. Shannon.

4029. Evolvulus alsinoides, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4712. Evolvulus alsinoides, L.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

6207. Evolvulus nummularius, L.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

669. Solanum aligerum, Schlecht. ex char. determ. Coulter.

Rio Blanco, Depart. San Márcos, Guatemala, alt. 9190 pp.

M. Jan. 1892. Leg. W. C. Shannon.

3619. Solanum aligerum, Schlecht. ex char. determ. Coulter.

Volcan Acatenango, Depart. Zacatepéquez, Guatemala, alt. 8000 pp.

M. Aug. 1892. Leg. W. C. Shannon.

1457. Solanum Amatitlanense, Coult. n. sp. ined.

Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.

M. Febr. 1892. Leg. J. D. S.

4736. Solanum Arrazolense, Coult. n. sp. ined.

Arrazola, Depart. Guatemala, Guatemala, alt. 6000 pp.

M. Apr. 1893. Leg. Heyde et Lux.

5867. Solanum callicarpæfolium, Kunth et Bouché.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

2670. Solanum Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 144.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

4896. Solanum Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 144.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

3443. Solanum Donnell-Smithii, Coult.,

var. spinosior, Coult. n. var. ined.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

621. Solanum lentum, Cav.

determ. Coulter.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

668. Solanum lentum, Cav.

determ. Coulter.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.

M. Mart. 1892. Leg. W. C. Shannon.

616. Solanum mammosum, L.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

4258. Solanum mammosum, L.

determ. Coulter.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

618. Solanum Mazatenangense, Coult. n. sp. ined.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

624. Solanum Mazatenangense, Coult. n. sp. ined.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.

M. Sept. 1891. Leg. W. C. Shannon.

2669. Solanum Mazatenangense, Coult. n. sp. ined.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.
M. Apr. 1892. Leg. J. D. S.

3442. Solanum Mazatenangense, Coult. n. sp. ined.

Arrazola, Depart. Guatemala, Guatemala, alt. 5500 pp.
M. Maj. 1892. Leg. Heyde et Lux.

4735. Solanum Mazatenangense, Coult. n. sp. ined.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Nov. 1891. Leg. Heyde et Lux.

620. Solanum nigrum, L.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

3438. Solanum nudum, H.B.K.

determ. Coulter.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jul. 1892. Leg. Heyde et Lux.

3449. Solanum nudum, H.B.K.

determ. Coulter.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3450. Solanum Quichense, Coult. n. sp. ined.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3447. Solanum refractum, Hook. et Arn.

determ. Coulter.

Arrazola, Depart. Guatemala, Guatemala, alt. 6000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

2677. Solanum Seaforthianum, Andr.

determ. Coulter.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.
M. Apr. 1892. Leg. J. D. S.

3821. Solanum Seaforthianum, Andr.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

2674. Solanum tectum, Pers.

determ. Coulter.

San José, Depart. Escuintla, Guatemala, alt. 0 pp.
M. Apr. 1892. Leg. J. D. S.

617. Solanum torvum, Sw.

determ. Coulter.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

622. Solanum torvum, Sw.

determ. Coulter.

Primavera, Depart. Sololá, Guatemala, alt. 760 pp.

M. Jul. 1891. Leg. W. C. Shannon.

3440. Solanum torvum, Sw.

determ. Coulter.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3441. Solanum torvum, Sw.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3446. Solanum torvum, Sw.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

5872. Solanum verbascifolium, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

3818. Saracha Jaltomata, Schlecht.

determ. Coulter.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3444. Bassovia Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 145.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4259. Bassovia Donnell-Smithii, Coult.

in Botan. Gaz. xvi. 145.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3435. Bassovia lucida, Dunal ex char.

determ. Coulter.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3439. Bassovia Mexicana, Robinson.

determ. Coulter.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

206. Capsicum baccatum, L.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Oct. 1891. Leg. W. C. Shannon.

236. Capsicum baccatum, L.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

3436. Capsicum frutescens, L.

determ. Coulter.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4545. Capsicum frutescens, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

619. Brachistus Escuintlensis, Coult.

in Botan. Gaz. xvi. 143.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

651. Brachistus Escuintlensis, Coult.

in Botan. Gaz. xvi. 143.

San Sebastián, Depart. Retalhuleu, Guatemala, alt. 1000 pp.

M. Oct. 1891. Leg. W. C. Shannon.

5861. Nicandra physaloides, Gaertn.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

4021. Datura Tatula, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5862. Datura Tatula, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

2678. Cestrum aurantiaceum, Lindl.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Mart. 1892. Leg. J. D. S.

2682. Cestrum dumetorum, Schlecht.

Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. J. D. S.

2680. Cestrum lanatum, Mart. et Gal.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

4899. Cestrum macrophyllum, Vent.?

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

282. Cestrum nocturnum, L.

Calél, Depart. Totonicapám, Guatemala, alt. 8500 pp.

M. Nov. 1891. Leg. W. C. Shannon.

2681. Cestrum nocturnum, L.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5367. Cestrum nocturnum, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1888. Leg. C. Thieme.

5793. Cestrum nocturnum, L.

Zorillo incolarum.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

2679. Cestrum oblongifolium, Schlecht.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5248. Cestrum vespertinum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Apr. 1887. Leg. C. Thieme.

4020. Nicotiana plumbaginifolia, Viv.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4905. Browallia demissa, L.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4906. Browallia demissa, L.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

5876. Browallia demissa, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4904. Calceolaria Irazuensis, Donnell Smith

in Botan. Gaz. xx. 292.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 9000 pp.

M. Mart. 1894. Leg. J. D. S.

4546. Calceolaria Mexicana, Benth.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1890. Leg. Heyde et Lux.

5874. Calceolaria Mexicana, Benth.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6362. Russelia juncea, Zucc.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

5384. Russelia sarmentosa, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Nov. 1888. Leg. C. Thieme.

339. Hemichæna fruticosa, Benth.

San Cristóbal Cucho, Depart. San Márcos, Guatemala, alt. 8440 pp.
M. Jan. 1892. Leg. W. C. Shannon.

5875. Leucocarpus alatus, D. Don.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5383. Stemodia parviflora, Ait.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1887. Leg. C. Thieme.

4900. Herpestis Salzmanni, Benth.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

5380. Scoparia dulcis, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Aug. 1889. Leg. C. Thieme.

5877. Scoparia dulcis, L.

Marriposa, Prov. Alajuela, Costa Rica, alt. 5500 pp.
M. Nov. 1887. Leg. A. Alfaro.

5382. Capraria biflora, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1888. Leg. C. Thieme.

5873. Castilleja communis, Benth.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

4901. Castilleja Irasuensis, Œrst.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 10,000 pp.
M. Mart. 1894. Leg. J. D. S.

281. Castilleja pectinata, Mart. et Gal.

Calél, Depart. Totonicapám, Guatemala, alt. 8500 pp.
M. Nov. 1891. Leg. W. C. Shannon.

318. Castilleja pectinata, Mart. et Gal.

Volcan Tajumulco, Depart. San Márcos, Guatemala, alt. 7000 pp.
M. Jan. 1892. Leg. W. C. Shannon.

285. Castilleja tenuiflora, Benth.

San Cárlos Sija, Depart. Totonicapám, Guatemala, alt. 9230 pp.
M. Dec. 1891. Leg. W. C. Shannon.

5877[B]. Lamourouxia Gutierrezii, Œrst.

Marriposa, Prov. Alajuela, Costa Rica, alt. 5500 pp.
M. Nov. 1887. Leg. A. Alfaro.

4902. Lamourouxia lanceolata, Benth.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

4033. Achimenes coccinea, Pers.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4548. Achimenes grandiflora, DC.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Dec. 1889. Leg. Heyde et Lux.

6209. Achimenes grandiflora, DC.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5878. Achimenes hirsuta, Lindl.?

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

3104. Achimenes longiflora, DC.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

6208. Achimenes pedunculata, Benth.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

4443. Isoloma Deppeanum, Hemsl.

San Bártolo Jocotenango, Depart. Quiché, Guatemala, alt. 4500 pp.
M. Jun. 1890. Leg. Heyde et Lux.

6210. Isoloma Deppeanum, Hemsl.

Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Aug. 1893. Leg. Heyde et Lux.

4907. Isoloma Schiedeanum, Hemsl.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.
M. Mart. 1894. Leg. J. D. S.

5386. Isoloma tomentosum, Benth. et Hook.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Nov. 1888. Leg. C. Thieme.

5882. Campanea Œrstedii, Œrst.

(*Rhytidophyllum Œrstedii*, Klotzsch.)
Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4547. Drymonia spectabilis, Mart.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1893. Leg. Heyde et Lux.

4908. Drymonia Turrialvæ, Hanst.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

5883. Alloplectus multiflorus, Hanst.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

4911. Columnea hirta, Klotzch et Hanst.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

4910. Columnea linearis, Œrst.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5886[B]. Columnea microcalyx, Hanst.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Nov. 1887. Leg. A. Alfaro.

4909. Columnea purpurata, Hanst.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5880. Columnea querceti, Œrst.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5881. Columnea querceti, Œrst.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Nov. 1888. Leg. Juan J. Cooper.

5884. Columnea tenuis, Klotzsch?

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5109. Napeanthus apodemus, Donnell Smith

in Botan. Gaz. xx. 6.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4550. Arrabidæa Chica, Burr.,

var. viscida, Donnell Smith

in Botan. Gaz. xx. 7.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

5393. Arrabidæa dichasia, Donnell Smith

in Botan. Gaz. xx. 6.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1890. Leg. C. Thieme.

5392. Anemopægma Vargasianum, DC.

San Pedro Sula, Depart. Santa Bírbara, Honduras, alt. 1200 pp.

M. Maj. 1888. Leg. C. Thieme.

4552. Pithecoctenium hexagonum, DC.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1893. Leg. Heyde et Lux.

5394. Pithecoctenium hexagonum, DC.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jul. 1888. Leg. C. Thieme.

2686. Pithecoctenium muricatum, DC.?

La Corona, Depart. Guatemala, Guatemala, alt. 4800 pp.
M. Febr. 1892. Leg. J. D. S.

2689. Distictis Rovirosana, Donnell Smith

in Botan. Gaz. xx. 7.

Obero, Depart. Escuintla, Guatemala, alt. 200 pp.
M. Mart. 1892. Leg. J. D. S.

5052. Distictis Rovirosana, Donnell Smith

in Botan. Gaz. xx. 7.

Papelón, Depart. Choluteca, Honduras, alt. 0 pp.
M. Febr. 1893. Leg. W. C. Shannon.

5053. Distictis Rovirosana, Donnell Smith

in Botan. Gaz. xx. 7.

Rio Limón, Lago de Granada, Depart. Rivas, Nicaragua, alt. 140 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5054. Distictis Rovirosana, Donnell Smith

in Botan. Gaz. xx. 7.

Sapoá, Depart. Rivas, Nicaragua, alt. 120 pp.
M. Apr. 1893. Leg. W. C. Shannon.

6211. Pyrostegia ignea, Presl.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5048. Cydista æquinoctialis, Miers,

forma (*Bignonia spectabilis*, Vahl.)

Liberia, Prov. Guanacaste, Costa Rica, alt. 400 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5049. Cydista æquinoctialis, Miers,

forma (*Bignonia spectabilis*, Vahl.)

Sapoá, Depart. Rivas, Nicaragua, alt. 120 pp.
M. Apr. 1893. Leg. W. C. Shannon.

5055. Cydista æquinoctialis, Miers,

forma (*Bignonia sarmentosa*, Bertol.?)

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.
M. Jan. 1893. Leg. W. C. Shannon.

5389. Cydista diversifolia, Miers.

(*Bignonia diversifolia*, H. B. K.)

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1888. Leg. C. Thieme.

5391. Cydista diversifolia, Miers.

(*Bignonia diversifolia*, H. B K.)

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1889. Leg. C. Thieme.

3110. Tecoma evenia, Donnell Smith

in Botan. Gaz. xx. 8.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3111. Couralia rosea, Donnell Smith

in Botan. Gaz. xx. 9.

(*Tecoma rosea*, Bertol.—*Tabebuia rosea*, DC.)

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Mart. 1892. Leg. Heyde et Lux.

4912. Couralia rosea, Donnell Smith

in Botan. Gaz. xx. 9.

(*Tecoma rosea*, Bertol.—*Tabebuia rosea*, DC.)

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Apr. 1894. Leg. J. D. S.

5047. Couralia rosea, Donnell Smith

in Botan. Gaz. xx. 9.

(*Tecoma rosea*, Bertol.—*Tabebuia rosea*, DC.)

Llanos de Sapoá, Prov. Guanacaste, Costa Rica, alt. 650 pp.

M. Apr. 1893. Leg. W. C. Shannon.

5388. Couralia rosea, Donnell Smith

in Botan. Gaz. xx. 9.

(*Tecoma rosea*, Bertol.—*Tabebuia rosea*, DC.)

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Maj. 1888. Leg. C. Thieme.

3050. Stenolobium stans, Seem.

(*Tecoma stans*, Juss.)

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4360. Stenolobium stans, Seem.

(*Tecoma stans*, Juss.)

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4551. Stenolobium stans, Seem.

(*Tecoma stans*, Juss.)

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1889. Leg. Heyde et Lux.

5056. Stenolobium stans, Seem.

(*Tecoma stans*, Juss.)

Lago Ilopango, Depart. San Salvador, Salvador, alt. 2060 pp.

M. Dec. 1892. Leg. W. C. Shannon.

6000. Tourretia lappacea, Willd.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5395. Martynia diandra, Glox.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1888. Leg. C. Thieme.

6364. Martynia diandra, Glox.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

6365. Thunbergia alata, Boj.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4373. Elytraria tridentata, Vahl.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5058. Ruellia albicaulis, Bert.

Jiquilisco, Depart. Usulután, Salvador, alt. 220 pp.

M. Dec. 1892. Leg. W. C. Shannon.

5059. Ruellia Hookeriana, Hemsl.

Volcan Orosí, Prov. Guanacaste, Costa Rica, alt. 1200 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4713. Ruellia lactea, Cav.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5057. Ruellia paniculata, L.

Rio San Bernardo, Depart. Choluteca, Honduras, alt. 0 pp.

M. Febr. 1893. Leg. W. C. Shannon.

5060. Blechum Brownei, Juss.

Rio San Bernardo, Depart. Choluteca, Honduras, alt. 0 pp.

M. Febr. 1893. Leg. W. C. Shannon.

5397. Blechum Brownei, Juss.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1889. Leg. C. Thieme.

5005. Androcentrum multiflorum, Lemaire.

Palo Blanco, Depart. Chinandega, Nicaragua, alt. 0 pp.

M. Mart. 1893. Leg. W. C. Shannon.

4560. Eranthemum præcox, Benth.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6J00 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5404. Aphelandra acutifolia, Nees.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 630 pp.

M. Mart. 1890. Leg. C. Thieme.

6212. Aphelandra Heydeana, Donnell Smith

in Botan. Gaz. xviii. 210, t. xxiii.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6213. Aphelandra Heydeana, Donnell Smith

in Botan. Gaz. xviii. 210, t. xxiii.

Rio Chiquito, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

5403. Aphelandra pectinata, Willd.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 1000 pp.

M. Dec. 1888. Leg. C. Thieme.

2696. Aphelandra Schiedeana, Cham. et Schl.

Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.

M. Febr. 1892. Leg. J. D. S.

4917. Aphelandra Sinclairiana, Nees.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5399. Dianthera comata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Jun. 1888. Leg. C. Thieme.

4916. Jacobinia Mohintli, Hemsl.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4557. Jacobinia tinctoria, Hemsl.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5400. Jacobinia tinctoria, Hemsl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Jul. 1889. Leg. C. Thieme.

4383. Thyrsacanthus callistachyus, Nees.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4553. Thyrsacanthus callistachyus, Nees.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5402. Thyrsacanthus callistachyus, Nees.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1888. Leg. C. Thieme.

4914. Thyrsacanthus Flagellum, Œrst.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4915. Thyrsacanthus Flagellum, Œrst.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. A. Alfaro.

2697. Thyrsacanthus strictus, Nees,

forma evolutior. (*Justicia corymbulosa*, Bertol.?)

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

5888. Dicliptera unguiculata, Nees.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4559. Henrya imbricans, Donnell Smith

in Botan. Gaz. xvi. 198.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5409. Lantana Camara, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Febr. 1887. Leg. C. Thieme.

5892. Lantana Camara, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

5408. Lantana hispida, Kunth.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Apr. 1887. Leg. C. Thieme.

4918. Lantana lilacina, Desf.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4715. Lantana velutina, Mart. et Gal.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

4388. Lippia myriocephala, Cham. et Schl.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4389. Lippia umbellata, Cav.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

4118. Stachytarpheta dichotoma, Vahl.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5406. Stachytarpheta Franzii, Polak.

in Linnæa, xli. 593.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Sept. 1888. Leg. C. Thieme.

4716. Stachytarpheta Jamaicensis, Vahl.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5612. Priva echinata, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1889. Leg. C. Thieme.

3019. Verbena littoralis, H.B.K.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

5890. Verbena littoralis, H.B.K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5410. Petræa arborea, Kunth.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Maj. 1888. Leg. C. Thieme.

5889. Citharexylum villosum, Jacq.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6007. Duranta Mutisii, L.,
var. Costaricensis, Donnell Smith

in Botan. Gaz. xx. 9.
Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6367. Duranta Plumieri, Jacq.

Chicacao, Depart. Sololá, Guatemala, alt. 1500 pp.
M. Febr. 1894. Leg. Heyde et Lux.

6368. Duranta Plumieri, Jacq.

Sambrerito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

5412. Ægiphila elata, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1888. Leg. C. Thieme.

5411. Cornutia grandifolia, Schauer.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1888. Leg. C. Thieme.

4717. Marsypianthes hyptoides, Mart.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.
M. Maj. 1892. Leg. W. C. Shannon.

5415. Marsypianthes hyptoides, Mart.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1890. Leg. C. Thieme.

5894. Marsypianthes hyptoides, Mart.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

6224. Marsypianthes hyptoides, Mart.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1894. Leg. Heyde et Lux.

5898. Hyptis capitata, Jacq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5417. Hyptis lantanæfolia, Poit.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Maj. 1890. Leg. C. Thieme.

6222. Hyptis lappacea, Benth.

Canchón, Depart. Santa Rosa, Guatemala. alt. 2000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

5896. Hyptis lilacina, Schiede et Deppe.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

6221. Hyptis oblongifolia, Benth.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

3015. Hyptis pectinata, Poit.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Mart. 1892. Leg. Heyde et Lux.

4393[B]. Hyptis spicata, Poit.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jan. 1893. Leg. Heyde et Lux.

5897. Hyptis spicata, Poit.

Cartago, Prov, Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

6220. Hyptis spicata, Poit.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Oct. 1894. Leg. Heyde et Lux.

6219. Hyptis spicigera, Lam.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1894. Leg. Heyde et Lux.

5416. Hyptis suaveolens, Poit.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Dec. 1888. Leg. C. Thieme.

5899. Hyptis tiliæfolia, Vahl.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Oct. 1888. Leg. A. Alfaro.

5419. Hyptis verticillata, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Sept. 1887. Leg. C. Thieme.

4381. Salvia cinnabarina, Mart. et Gal.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5421. Salvia coccinea, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

5895. Salvia Costaricensis, Œrst.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

5895B. Salvia Costaricensis, Œrst.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Oct. 1888. Leg. A. Alfaro.

4564. Salvia cyanea, Benth.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Maj. 1893. Leg. Heyde et Lux.

260. Salvia lasiantha, Benth.

San Cárlos Sija, Depart. Totonicapám, Guatemala, alt. 9230 pp.
M. Dec. 1891. Leg. W. C. Shannon.

823. Salvia lavanduloides, H.B.K.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

4395. Salvia lavanduloides, H.B.K.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4400. Salvia Mocinoi, Benth.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4048. Salvia Mocinoi, Benth.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

2597. Salvia Mocinoi, Benth.,

forma foliis subtus cano-velutinis.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.
M. Mart. 1892. Leg. J. D. S.

3014. Salvia occidentalis, Sw.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Maj. 1892. Leg. Heyde et Lux.

5422. Salvia occidentalis, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1888. Leg. C. Thieme.

5901. Salvia occidentalis, Sw.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

4919. Salvia polystachya, Œrst.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

3119. Salvia purpurea, Cav.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4053. Salvia purpurea, Cav.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4563. Salvia purpurea, Cav.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp
M. Nov. 1889. Leg. Heyde et Lux.

5902. Salvia purpurea, Cav.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5903. Salvia purpurea, Cav.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Nov. 1888. Leg. Juan J. Cooper.

3612. Salvia Shannoni, Donnell Smith

in Botan. Gaz. xix. 256.

Volcan Chingo, Depart. Jutiapa, Guatemala, alt. 3000 pp.
M. Oct. 1892. Leg. W. C. Shannon.

4052. Salvia Shannoni, Donnell Smith

in Botan. Gaz. xix. 256.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Oct. 1892. Leg. Heyde et Lux.

5900. Salvia tiliæfolia, Vahl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1888. Leg. Juan J. Cooper.

4566. Scutellaria longifolia, Benth.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

4562. Stachys agraria, Cham. et Schl.

San Bártolo Jocotenango, Depart. Quiché, Guatemala, alt. 4500 pp.
M. Jun. 1890. Leg. Heyde et Lux.

800. Stachys coccinea, Jacq.

Santiago, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
1891. Leg. Rosalío Gómez.

3122. Stachys coccinea, Jacq.

Trapichito, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Jun. 1892. Leg. Heyde et Lux.

4565. Stachys Costaricensis, Briq.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 143.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

5893. Stachys Costaricensis, Briq.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 143.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5061. Leonurus Sibiricus, L.

Soyapango, Depart. San Salvador, Salvador, alt. 2100 pp.

M. Dec. 1892. Leg. W. C. Shannon.

5904. Leonurus Sibiricus, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

5413. Teucrium inflatum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jun. 1888. Leg. C. Thieme.

4368. Chaunostoma mecistandrum, Donnell Smith

in Botan. Gaz. xx. 9, t. iii.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5905. Plantago hirtella, H.B.K.?

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

1459. Plantago major, L.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

4568. Oxybaphus violaceus, Choisy.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

4718. Oxybaphus violaceus, Choisy.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5624. Oxybaphus violaceus, Choisy.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

6372. Boerhaavia erecta, L.

Chicacao, Depart. Sololá, Guatemala, alt. 1500 pp.

M. Febr. 1894. Leg. Heyde et Lux.

6371. Boerhaavia viscosa, L.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

5002. Bougainvillæa spectabilis, Willd.,
var. (*B. glabra*, Choisy.)

Santa Ana, Depart. Santa Ana, Salvador, alt. 2120 pp.
M. Nov. 1892. Leg. W. C. Shannon.

6370. Bougainvillæa spectabilis, Willd.,
var. (*B. glabra*, Choisy.)

Sambrerito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

5425. Pisonia aculeata, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jan. 1887. Leg. C. Thieme.

6301. Pisonia macranthocarpa, Donnell Smith
in Botan. Gaz. xx. 293.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

5423. Neea psychotrioides, Donnell Smith
in Botan. Gaz. xvi. 199.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Sept. 1888. Leg. C. Thieme.

5444. Chamissoa altissima, H.B.K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Febr. 1889. Leg. C. Thieme.

4574. Chamissoa confertiflora, Torr.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

4367. Achyranthes aspera, L.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

4062. Amaranthus chlorostachys, Willd.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Aug. 1892. Leg. Heyde et Lux.

5908. Amaranthus hybridus, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5441. Amaranthus spinosus, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1889. Leg. C. Thieme.

5907. Amaranthus spinosus, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

1296. Iresine celosioides, L.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
M. Febr. 1892. Leg. J. D. S.

5062. Iresine celosioides, L.

Cojutepeque, Depart. Cuscatlán, Salvador, alt. 2800 pp.
M. Dec. 1892. Leg. W. C. Shannon.

5445. Iresine celosioides, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Mart. 1888. Leg. C. Thieme.

5911. Iresine celosioides, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

4571. Iresine celosioides, L.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.
M. Apr. 1890. Leg. Heyde et Lux.

4572. Iresine celosioides, L.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

1456. Rivina lævis, L.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

4410. Rivina lævis, L.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4923. Rivina lævis, L.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5428. Rivina lævis, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

5913. Rivina lævis, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5426. Petiveria alliacea, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Maj. 1888. Leg. C. Thieme.

5427. Microtea debilis, Sw.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 1000 pp.
M. Maj. 1888. Leg. C. Thieme.

6226. Microtea debilis, Sw.

Las Viñas, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

357. Phytolacca icosandra, L.

Chicoy, Depart. Chimaltenango, Guatemala, alt. 9000 pp.
M. Mart. 1892. Leg. W. C. Shannon.

5429. Phytolacca icosandra, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Jun. 1888. Leg. C. Thieme.

5914[B]. Phytolacca octandra, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5431. Polygonum punctatum, Ell.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Maj. 1890. Leg. C. Thieme.

5914. Polygonum punctatum, Ell.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

5915. Rumex crispus, L.?

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5432. Antigonon cinerascens, Mart. et Gal.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1888. Leg. C. Thieme.

4922. Antigonon Guatimalense, Meissn.

(*A. insigne*, Mast.)
Bellisima incolarum.
San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5063. Antigonon Guatimalense, Meissn.

Triunfo, Depart. Usulután, Salvador, alt. 0 pp.
M. Jan. 1893. Leg. W. C. Shannon.

6374. Antigonon Guatimalense, Meissn.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.
M. Jan. 1894. Leg. Heyde et Lux.

5064. Triplaris Macombii, Donnell Smith

in Botan. Gaz. xix. 257.
Jiquilisco, Depart. Usulután, Salvador, alt. 220 pp.
M. Jan. 1893. Leg. W. C. Shannon.

6375. Triplaris Macombii, Donnell Smith,

var. rufescens, Donnell Smith
in Botan. Gaz. xx. 293.
Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.
M. Jan. 1894. Leg. Heyde et Lux.

57. Marathrum fœniculaceum, Humb. et Bonpl.

Rio Bravo, Depart. Sololá, Guatemala, alt. 460 pp.
M. Sept. 1891. Leg. W. C. Shannon.

4921. Marathrum Schiedeanum, Cham.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.
M. Mart. 1894. Leg. J. D. S.

5435. Marathrum Schiedeanum, Cham.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jan. 1887. Leg. C. Thieme.

5436. Aristolochia grandiflora, Sw.?

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Apr. 1887. Leg. C. Thieme.

6373. Aristolochia loriflora, Mast.

in Botan. Jahrb. viii. 220.
Nomen vulgare *Guaco.*
determ. Masters.
Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.
M. Jul. 1894. Leg. Heyde et Lux.

2591. Piper aduncum, L.

determ. C. de Candolle.
San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.
M. Apr. 1892. Leg. J. D. S.

5454. Piper auritum, Kunth.

determ. C. de Candolle.
Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jul. 1888. Leg. C. Thieme.

4577. Piper auritum, Kunth,
var. amplifolium, C. DC.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala,
alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5920. Piper Dombeyanum, C. DC.

determ. C. de Candolle.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

3461. Piper Heydei, C. DC.

in Botan. Gaz. xix. 7.
San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5919. Piper hirsutum, Sw.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. A. Alfaro.

5918. Piper hirsutum, Sw.,
var. Tonduzii, C. DC.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 106.
determ. C. de Candolle.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Maj. 1887. Leg. Juan J. Cooper.

5458. Piper Jalapense, C. DC.

determ. C. de Candolle.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1889. Leg. C. Thieme.

3462. Piper Luxii, C. DC.

in Botan. Gaz. xix. 5.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

1487. Piper Martensianum, C. DC.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

775. Piper medium, Jacq.

determ. C. de Candolle.

Primavera, Depart. Sololá, Guatemala, alt. 760 pp.

M. Jul. 1891. Leg. W. C. Shannon.

5455. Piper Muelleri, C. DC.

determ. C. de Candolle.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Jun. 1887. Leg. C. Thieme.

2593. Piper Papantlense, C. DC.

determ. C. de Candolle.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

4576. Piper Papantlense, C. DC.

determ. C. de Candolle.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5459. Piper pseudo-Lindenii, C. DC.,

var. magnifolium, C. DC. n. var. ined.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Apr. 1888. Leg. C. Thieme.

5916. Piper phthinotrichon, Miq.

determ. C. de Candolle.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1887. Leg. Juan J. Cooper.

5457. Piper Rohrii, C. DC.

determ. C. de Candolle.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1887. Leg. C. Thieme.

2590. Piper Santa-rosanum, C. DC.

in Botan. Gaz. xix. 258.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

3463. Piper Santa-rosanum, C. DC.

in Botan. Gaz. xix. 258.

Ambelice, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5456. Piper tuberculatum, Jacq.

determ. C. de Candolle.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1888. Leg. C. Thieme.

5917. Piper tuberculatum, Jacq.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1887. Leg. Juan J. Cooper.

2592. Piper tuberculatum, Jacq., var. obtusifolium, C. DC.

in Botan. Gaz. xix. 8.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.

M. Apr. 1892. Leg. J. D. S.

3464. Piper tuberculatum, Jacq., var. obtusifolium, C. DC.

in Botan. Gaz. xix. 8.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3460. Piper Uspantanense, C. DC.

in Botan. Gaz. xix. 6.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3827. Piper Uspantanense, C. DC.

in Botan. Gaz. xix. 6.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3456. Peperomia adscendens, C. DC.

determ. C. de Candolle.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

3458. Peperomia blanda, Kunth, forma dissimilis.

determ. C. de Candolle.

San Siguán, Depart. Quiché, Guatemala, alt. 5800 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4929. Peperomia caulibarbis, Miq., var. Jimeneziana, C. DC. var. nov. ined.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

3832. Peperomia chrysocarpa, C. DC.

in Bull. Soc. Bot. Belg. xxix. 70.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5928. Peperomia chrysocarpa, C. DC.

in Bull. Soc. Bot. Belg. xxix. 70.

determ. C. de Candolle.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5927. Peperomia Cooperi, C. DC.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 129.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5924. Peperomia galioides, Kunth.

determ. C. de Candolle.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Maj. 1888. Leg. A. Alfaro.

2586. Peperomia galioides, Kunth,

var. longifolia, C. DC. var. nov. ined.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Mart. 1892. Leg. J. D. S.

2582. Peperomia Guadaloupensis, C. DC.

determ. C. de Candolle.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

2587. Peperomia Guatemalensis, C. DC.

in Botan. Gaz. xix. 10.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

3834. Peperomia Heydei, C. DC.

in Botan. Gaz. xix. 9.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3835. Peperomia Heydei, C. DC.,

var. minor, C. DC.

in Botan. Gaz. xix. 10.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5925. Peperomia Langsdorfii, Miq.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

773. Peperomia Lindeniana, Miq.

determ. C. de Candolle.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

2589. Peperomia Lindeniana, Miq.

determ. C. de Candolle.

Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.

M. Febr. 1892. Leg. J. D. S.

3830. Peperomia Lindeniana, Miq.

determ. C. de Candolle.

Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

3828. Peperomia Luxii, C. DC.

in Botan. Gaz. xix. 260.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

2578. Peperomia macrophylla, C. DC.

in Botan. Gaz. xix. 8.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

2579. Peperomia macrophylla, C. DC.

in Botan. Gaz. xix. 8.

Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.

M. Febr. 1892. Leg. J. D. S.

4926^{B}. Peperomia maculosa, A. Dietr.

determ. C. de Candolle.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

3455. Peperomia magnoliæfolia, A. Dietr.

determ. C. de Candolle.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

4926. Peperomia magnoliæfolia, A. Dietr.

determ. C. de Candolle.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5926. Peperomia magnoliæfolia, A. Dietr.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4000 pp.

M. Apr. 1887. Leg. Juan J. Cooper.

3826. Peperomia Muelleri, C. DC.

determ. C. de Candolle.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4928. Peperomia Myrtillus, Miq.

determ. C. de Candolle.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Apr. 1894. Leg. J. D. S.

2585. Peperomia nigropunctula, Miq.

determ. C. de Candolle.

Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.

M. Febr. 1892. Leg. J. D. S.

773B. Peperomia nummularifolia, Kunth.

determ. C. de Candolle.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.

M. Aug. 1891. Leg. W. C. Shannon.

2581. Peperomia nummularifolia, Kunth.

determ. C. de Candolle.

Barranca del Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.

M. Apr. 1892. Leg. J. D. S.

3829. Peperomia ovato-peltata, C. DC.,

forma ovario ellipsoideo breviter stipitato apice stylum carnosum gerente, bacca cylindrica longe stipitata brevi.

determ. C. de Candolle.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Aug. 1892. Leg. Heyde et Lux.

5921. Peperomia Palmana, C. DC.

in Bull. Soc. Bot. Belg. xxix. 70.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4927. Peperomia paniculata, Regel.

determ. C. de Candolle.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

3831. Peperomia pellucida, Kunth.

determ. C. de Candolle.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5922. Peperomia Poasana, C. DC.

in Durand et Pittier Prim. Fl. Costar., Fasc. i. 127.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

3457. Peperomia quadrifolia, Kunth.

determ. C. de Candolle.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3459. Peperomia quadrifolia, Kunth.

determ. C. de Candolle.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

2588. Peperomia reflexa, A. Dietr.

determ. C. de Candolle.

Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5923. Peperomia reflexa, A. Dietr.

determ. C. de Candolle.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

2583. Peperomia San-Felipensis, C. DC.

in Botan. Gaz. xix. 9.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1892. Leg. J. D. S.

3454. Peperomia Santa-rosana, C. DC.

in Botan. Gaz. xix. 10.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

2584. Peperomia Sisiana, C. DC.

in Botan. Gaz. xix. 9.

Rio Sis, Depart. Suchitepéquez, Guatemala, alt. 1300 pp.

M. Apr. 1892. Leg. J. D. S.

2580. Peperomia violæfolia, C. DC.

in Botan. Gaz. xix. 8.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

4925. Siparuna cauliflora, Hemsl.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

6229. Persea Americana, Mill.

Los Verdes, Depart Amatitlan, Guatemala, alt. 3500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

1807. Ocotea perseifolia, Mez et Donnell Smith

in Botan. Gaz. xx. 10.

Yzabal, Depart. Yzabal, Guatemala, alt. 120 pp.

M. Apr. 1889. Leg. J. D. S.

5463. Nectandra glabrescens, Benth.

determ. Mez.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1890. Leg. C. Thieme.

4261. Nectandra globosa, Mez.

determ. Mez.

Rio de La Plata, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

5003. Nectandra globosa, Mez.

determ. Mez.

Triunfo, Depart. Usulután, Salvador, alt. 0 pp.

M. Jan. 1893. Leg. W. C. Shannon.

4260. Nectandra Heydeana, Mez et Donnell Smith

in Botan. Gaz. xix. 262, t. xxv.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4578. Nectandra Heydeana, Mez et Donnell Smith

in Botan. Gaz. xix. 262, t. xxv.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

4932. Nectandra sanguinea, Rottb.

determ. Mez.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5462. Nectandra sanguinea, Rottb.

determ. Mez.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

4374. Nectandra sinuata, Mez,

forma ovario glabro styloque elongatiore a typo recedens, tamen certissime eadem species.

determ. Mez.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

2161. Litsea Guatemalensis, Mez.

determ. Mez.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 8000 pp.

M. Apr. 1890. Leg. J. D. S.

5930. Loranthus marginatus, Lam.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5437. Loranthus pauciflorus, Sw.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jul. 1887. Leg. C. Thieme.

5932. Loranthus pauciflorus, Sw.?

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5065. Phoradendron rubrum, Griseb.

Rio de Las Lajas, Depart. Rivas, Nicaragua, alt. 120 pp.

M. Apr. 1893. Leg. W. C. Shannon.

412. Pedilanthus macradenius, Donnell Smith

in Botan. Gaz. xix. 263.

Canibal, Depart. Huehuetenango, Guatemala, alt. 3180 pp.

M. Dec. 1891. Leg. W. C. Shannon.

5011. Pedilanthus tithymaloides, Poit.

Hacienda Ánimas, Prov. Guanacaste, Costa Rica, alt. 500 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4569. Euphorbia adenoptera, Bertol.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jun. 1893. Leg. Heyde et Lux.

4262. Euphorbia arenaria, H.B.K.

determ. Lotsy.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

3476. Euphorbia campestris, Cham. et Schl.

determ. Lotsy.

Cunén, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3481. Euphorbia chamæpeploides, Lotsy

in Botan. Gaz. xx. 351.

San Martín Jilotepeque, Depart. Chimaltenango, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3837. Euphorbia dentata, Michx.

determ. Lotsy.

Rio de Las Cañas, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

1421. Euphorbia graminifolia, Michx.

Santa Rosa, Depart. Baja Verapaz, Guatemala, alt. 5000 pp.

M. Sept. 1888. Leg. von Türckheim.

4264. Euphorbia lancifolia, Schlecht.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4581. Euphorbia lancifolia, Schlecht.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

305. Euphorbia leucocephala, Lotsy

in Botan. Gaz. xx. 350, t. xxiv.

Cuilco, Depart. Huehuetenango, Guatemala, alt. 3800 pp.

M. Dec. 1891. Leg. W. C. Shannon.

3482. Euphorbia leucocephala, Lotsy

in Botan. Gaz. xx. 350, t. xxiv.

Rio Negro, Depart. Quiché, Guatemala, alt. 3600 pp.

M. Mart. 1892. Leg. Heyde et Lux.

3661. Euphorbia leucocephala, Lotsy

in Botan. Gaz. xx. 350, t. xxiv.

Volcan Chingo, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Oct. 1892. Leg. W. C. Shannon.

6377. Euphorbia leucocephala, Lotsy

in Botan. Gaz. xx. 350, t. xxiv.

Patzicía, Depart. Chimaltenango, Guatemala, alt. 6500 pp.

M. Febr. 1894. Leg. Heyde et Lux.

3850. Euphorbia microappendiculata, Lotsy

in Botan. Gaz. xx. 349.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4263. Euphorbia ocymoidea, L.

determ. Lotsy.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

3589. Euphorbia pilulifera, L.

Cubelguitz, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

1892. Leg. von Türckheim.

3841. Euphorbia pilulifera, L.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4942. Euphorbia pilulifera, L.

Rio Virilla, Prov. San José, Costa Rica, alt. 3200 pp.

M. Mart. 1894. Leg. J. D. S.

5476. Euphorbia pilulifera, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

5934. Euphorbia pilulifera, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

5937. Euphorbia pulcherrima, Willd.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4271. Euphorbia rubrosperma, Lotsy

in Botan. Gaz. xx. 349.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

2617. Euphorbia Xalapensis, H.B.K.

determ. Lotsy.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.

M. Febr. 1892. Leg. J. D. S.

3479. Euphorbia Xalapensis, H.B.K.

determ. Lotsy.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

3849. Euphorbia Xalapensis, H.B.K.

determ. Lotsy.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4269. Euphorbia Xalapensis, H.B.K.

determ. Lotsy.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5936. Euphorbia Xalapensis, H.B.K.

determ. Lotsy.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

5469. Phyllanthus acuminatus, Vahl.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 1000 pp.

M. Jul. 1887. Leg. C. Thieme.

4270. Phyllanthus lathyroides, H.B.K., var. genuinus, Muell. Arg.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4949. Phyllanthus Niruri, L.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1894. Leg. J. D. S.

5938. Phyllanthus Niruri, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Dec. 1887. Leg. Juan J. Cooper.

4582. Jatropha Curcas, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

5468. Jatropha urens, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1888. Leg. C. Thieme.

4719. Jatropha urens, L., var. genuina, Muell. Arg.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

2616. Croton Eluteria, Benn.

determ. Lotsy.

Palin, Depart. Amatitlan, Guatemala, alt. 3560 pp.

M. Febr. 1892. Leg. J. D. S.

3470. Croton eluterioides, Lotsy

in Botan. Gaz. xx. 352, t. xxv.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

3035. Croton Guatemalensis, Lotsy

in Botan. Gaz. xx. 353, t. xxv.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5471. Croton Panamensis, Muell. Arg.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

5939. Croton Xalapensis, H.B.K.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

6424. Julocroton argenteus, Diedr.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

3838. Julocroton triqueter, Baill.

determ. Lotsy.

Cerro Gordo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

5473. Manihot utilissima, Pohl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1887. Leg. C. Thieme.

5479. Acalypha alopecuroidea, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jun. 1889. Leg. C. Thieme.

5941. Acalypha alopecuroidea, Jacq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

6233. Acalypha alopecuroidea, Jacq.

Teocinte, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jun. 1893. Leg. Heyde et Lux.

6378. Acalypha alopecuroidea, Jacq.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.
M. Jan. 1894. Leg. Heyde et Lux.

3842. Acalypha arvensis, Muell. Arg.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4580. Acalypha Cancana, Muell. Arg.

determ. Lotsy.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Febr. 1893. Leg. Heyde et Lux.

2615. Acalypha Lotsii, Donnell Smith n. sp. ined.

Rio Ocosito, Depart. Quezaltenango, Guatemala, alt. 250 pp.
M. Apr. 1892. Leg. J. D. S.

3475. Acalypha Lotsii, Donnell Smith n. sp. ined.

Azagualpa, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

3839. Acalypha Lotsii, Donnell Smith n. sp. ined.
Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1892. Leg. Heyde et Lux.

2614. Acalypha macrostachya, Jacq.
Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

4945. Acalypha macrostachya, Jacq.
Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.
M. Mart. 1894. Leg. J. D. S.

4946. Acalypha macrostachya, Jacq.
Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

1417. Acalypha macrostachya, Jacq.,
var. sidæfolia, Muell. Arg.
determ. Lotsy.
Pansamalá, Depart. Alta Verapaz, Guatemala, alt. 3800 pp.
M. Oct. 1888. Leg. von Türckheim.

2618. Acalypha Schlechtendahliana, Muell. Arg.
determ. Lotsy.
Barranca de Eminencia, Depart. Amatitlan, Guatemala, alt. 1400 pp.
M. Febr. 1892. Leg. J. D. S.

2619. Acalypha Schlechtendahliana, Muell. Arg.
determ. Lotsy.
Acatepeque, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.
M. Mart. 1892. Leg. J. D. S.

1763. Tragia Guatemalensis, Lotsy
in Botan. Gaz. xx. 354.
Chicacao, Depart. Alta Verapaz, Guatemala, alt. 3500 pp.
M. Apr. 1889. Leg. J. D. S.

3846. Tragia volubilis, Muell. Arg.
determ. Lotsy.
Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

5470. Dalechampia scandens, L.
San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1889. Leg. C. Thieme.

3473. Stillingia aquatica, Chapm.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

4265. Stillingia sylvatica, Muell. Arg.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4579. Stillingia sylvatica, Muell. Arg.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

6381. Hura crepitans, L.

Nomen vulgare *Tetereta*.

Mongoy, Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

2491. Trema micrantha, Blume.

Capetillo, Depart. Zacatepéquez, Guatemala, alt. 4300 pp.

M. Mart. 1892. Leg. J. D. S.

5497. Trema micrantha, Blume.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jun. 1888. Leg. C. Thieme.

5946. Dorstenia Contrajerva, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

6237. Dorstenia Contrajerva, L.

Azagualpa, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

5492. Dorstenia Contrajerva, L., var. Houstoni, Bur.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Mart. 1889. Leg. C. Thieme.

6236. Dorstenia Contrajerva, L., var. Houstoni, Bur.

Azagualpa, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

6382. Dorstenia Drakena, L.

Nomen vernaculum *Contra-hierba*.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Jul. 1894. Leg. Heyde et Lux.

4936. Ficus sapida, Miq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1894. Leg. J. D. S.

5947[B]. Ficus sapida, Miq.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

4429. Pseudolmedia oxyphyllaria, Donnell Smith

in Botan. Gaz. xx. 294.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5494. Cecropia Humboldtiana, Klotzsch.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jul. 1887. Leg. C. Thieme.

4934. Cecropia Mexicana, Hemsl.

Guarumo incolarum.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

6238. Cecropia Mexicana, Hemsl.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

4826. Coussapoa villosa, Poepp. et Endl.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

2975. Urera Caracasana, Griseb.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5950. Pilea auriculata, Liebm.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

5952. Pilea Costaricensis, Donnell Smith

in Botan. Gaz. xx. 294.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6234. Pilea deltoidea, Liebm.

Azagualpa, Depart. Santa Rosa, Guatemala, alt. 2000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

2751. Pilea irrorata, Donnell Smith

in Botan. Gaz. xix. 11.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.
M. Apr. 1892. Leg. J. D. S.

4065. Pilea microphylla, Liebm.

Estanzuela, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

4933. Pilea pubescens, Liebm.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

5493. Pilea pumila, A. Gray.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1889. Leg. C. Thieme.

3147. Pilea Quichensis, Donnell Smith

in Botan. Gaz. xix. 12.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6500 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3145. Pilea senarifolia, Donnell Smith

in Botan. Gaz. xix. 12.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

2471. Ostrya Virginica, Willd.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 6000 pp.

M. Mart. 1892. Leg. J. D. S.

4069. Ostrya Virginica, Willd.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

5116. Lacistema myricoides, Sw.?

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4720. Cupressus Lindleyi, Klotszch.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5509. Zamia Loddigesii, Miq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1887. Leg. C. Thieme.

286. Bletia campanulata, Llave et Lex.

determ. Cogniaux.

Chiantla, Depart. Huehuetenango, Guatemala, alt. 6300 pp.

M. Dec. 1891. Leg. W. C. Shannon.

312. Bletia campanulata, Llave et Lex.

determ. Cogniaux.

Cuilco, Depart. Huehuetenango, Guatemala, alt. 3800 pp.

M. Dec. 1891. Leg. W. C. Shannon.

1665. Isochilus linearis, R. Br.

determ. Cogniaux.

Tucurú, Depart. Alta Verapaz, Guatemala, alt. 2400 pp.

M. Apr. 1889. Leg. J. D. S.

5067. Epidendrum atropurpureum, Willd.

determ. Cogniaux.

Rio Limón, Lago de Granada, Depart. Rivas, Nicaragua, alt. 140 pp.

M. Apr. 1893. Leg. W. C. Shannon.

1586. Epidendrum floribundum, H.B.K.

determ. Cogniaux.

Chabanal, Depart. Alta Verapaz, Guatemala, alt. 550 pp.

M. Apr. 1889. Leg. J. D. S.

462. Epidendrum Lindleyanum, Reichb. fil.

determ. Cogniaux.

Colotenango, Depart. Huehuetenango, Guatemala, alt. 5210 pp.

M. Dec. 1891. Leg. W. C. Shannon.

448B. Epidendrum radicans, Pav.

determ. Cogniaux.

Coatepeque, Depart. San Márcos, Guatemala, alt. 1490 pp.

M. Jan. 1892. Leg. W. C. Shannon.

1587. Epidendrum radicans, Pav.?

determ. Cogniaux.

Chimiquin, Depart. Alta Verapaz, Guatemala, alt. 1200 pp.

M. Apr. 1889. Leg. J. D. S.

4958. Cattleya Dowiana, Batem.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 9000 pp.

M. Apr. 1894. Leg. J. D. S.

470. Lælia anceps, Lindl.

determ. Cogniaux.

Colotenango, Depart. Huehuetenango, Guatemala, alt. 5210 pp.

M. Dec. 1891. Leg. W. C. Shannon.

5066. Schomburgkia tibicinis, Batem.

determ. Cogniaux.

Llanos de Sapoá, Prov. Guanacaste, Nicaragua, alt. 650 pp.

M. Apr. 1893. Leg. W. C. Shannon.

6388. Catasetum Russellianum, Hook.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.

M. Jan. 1894. Leg. Heyde et Lux.

450. Odontoglossum pulchellum, Batem.

determ. Cogniaux.

Amatenango, Depart. Huehuetenango, Guatemala, alt. 7000 pp.

M. Dec. 1891. Leg. W. C. Shannon.

451. Odontoglossum pulchellum, Batem.

determ. Cogniaux.

Cerro de Laguna, Depart. Huehuetenango, Guatemala, alt. 7000 pp.

M. Dec. 1891. Leg. W. C. Shannon.

475. Odontoglossum pulchellum, Batem.

determ. Cogniaux.

Colotenango, Depart. Huehuetenango, Guatemala, alt. 5210 pp.

M. Dec. 1891. Leg. W. C. Shannon.

2250. Oncidium Cavendishianum, Batem.

determ. Cogniaux.

San Juan Mixtan, Depart. Escuintla, Guatemala, alt. 500 pp.

M. Apr. 1890. Leg. J. D. S.

2249. Oncidium Wentworthianum, Batem.

determ. Cogniaux.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Febr. 1890. Leg. J. D. S.

6387. Hedychium coronarium, Roxb.

determ. Baker.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

4650. Costus comosus, Roscoe.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 7000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

6389. Alpinia nutans, Rosc.

determ. Baker.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.

M. Apr. 1894. Leg. Heyde et Lux.

5516. Maranta arundinacea, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Aug. 1887. Leg. C. Thieme.

5520. Thalia geniculata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1889. Leg. C. Thieme.

5518. Calathea discolor, Mey.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1887. Leg. C. Thieme.

4974. Heliconia cannoidea, Rich.

determ. Baker.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4635. Heliconia pendula, Wawra?

determ. Baker.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Maj. 1893. Leg. Heyde et Lux.

5068. Bromelia Pinguin, L.

determ. Baker.

Liberia, Prov. Guanacaste, Costa Rica, alt. 400 pp.

M. Apr. 1893. Leg. W. C. Shannon.

4961. Æchmea Bernouillana, Witten.

determ. Mez.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5958. Æchmea Bernouillana, Witten.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1887. Leg. Juan J. Cooper.

4962. Æchmea Friedrichsthalii, Mez et Donnell Smith in Botan. Gaz. xix. 263.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4960. Æchmea Mariæ-reginæ, Wendl.

determ. Mez.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4964. Æchmea pubescens, Baker.

determ. Mez.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5521. Pitcairnia atrorubens, Baker.

determ. Mez.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Sept. 1888. Leg. C. Thieme.

4294. Pitcairnia heterophylla, Beer.

determ. Mez.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4632. Pitcairnia heterophylla, Beer.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp

M. Dec. 1891. Leg. Heyde et Lux.

4959. Pitcairnia heterophylla, Beer.

San Francisco, Prov. San José, Costa Rica, alt. 3400 pp.

M. Apr. 1894. Leg. J. D. S.

3879. Pitcairnia puberula, Mez et Donnell Smith

in Botan. Gaz. xix. 264.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4963. Caraguata balanophora, Mez sp. nov. ined.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. J. D. S.

4631. Tillandsia Botterii, E. Morr.

(An species a *T. xyphostachys*, Baker nec Griseb., satis distincta ?)

determ. Mez.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4968. Tillandsia cæspitosa, Schlecht.

determ. Mez.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 7000 pp.

M. Mart. 1894. Leg. J. D. S.

4643. Tillandsia Caput-Medusæ, E. Morr.

determ. Mez.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Jun. 1893. Leg. Heyde et Lux.

4966. Tillandsia compressa, Bert.

determ. Mez.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

4634. Tillandsia cyanea, E. Morr.

determ. Mez.

Casillas, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4640. Tillandsia juncea, Lec.

determ. Mez.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jul. 1893. Leg. Heyde et Lux.

4967. Tillandsia juncea, Lec.

determ. Mez.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

5956. Tillandsia Leiboldiana, Schlecht.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1887. Leg. Juan J. Cooper.

5954. Tillandsia melanopus, Morr.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1887. Leg. Juan J. Cooper.

4629. Tillandsia polystachya, L.

determ. Mez.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4630. Tillandsia punctula, Schlecht.

determ. Mez.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 7000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4633. Tillandsia usneoides, L.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4628. Tillandsia variegata, Schlecht.

determ. Mez.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

4965. Tillandsia variegata, Schlecht.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1894. Leg. J. D. S.

5955. Tillandsia variegata, Schlecht.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1887. Leg. Juan J. Cooper.

5957. Catopsis nutans, Baker.

determ. Mez.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Jan. 1887. Leg. Juan J. Cooper.

5600. Xiphidium floribundum, Sw.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Sept. 1888. Leg. C. Thieme.

5526. Eleutherine plicata, Herb.

determ. Baker.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Apr. 1889. Leg. C. Thieme.

4642. Nemastylis multiflora, S. Watson.

determ. Baker.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Nov. 1889. Leg. Heyde et Lux.

4639. Orthosanthus Chimborazensis, Baker.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Nov. 1891. Leg. Heyde et Lux.

4975. Orthosanthus Chimborazensis, Baker.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. J. D. S.

4646. Sisyrinchium alatum, Hook.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

4723. Sisyrinchium alatum, Hook.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

4722. Sisyrinchium tenuifolium, H.B.K.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

4721. Hypoxis decumbens, L.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

4638. Zephyranthes Lindleyana, Herb.

determ. Baker.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Maj. 1893. Leg. Heyde et Lux.

6257. Zephyranthes Lindleyana, Herb.

determ. Baker.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

6390. Zephyranthes Lindleyana, Herb.

determ. Baker.

Patzun, Depart. Chimaltenango, Guatemala, alt. 6000 pp.

M. Febr. 1894. Leg. Heyde et Lux.

4724. Crinum erubescens, Ait.

Laguna Amatitlan, Depart. Amatitlan, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5959. Dioscorea calyculata, Donnell Smith

in Botan. Gaz. xx. 295.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Mart. 1887. Leg. A. Alfaro.

6260. Dioscorea calyculata, Donnell Smith

in Botan. Gaz. xx. 295.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6259. Dioscorea capillaris, Hemsl.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4969. Dioscorea cyanisticta, Donnell Smith

in Botan. Gaz. xx. 10.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4359. Dioscorea dicranandra, Donnell Smith

in Botan. Gaz. xix. 14.

Rinconcito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

2565. Dioscorea macrostachya, Benth.

Volcan Fuego, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.

M. Mart. 1892. Leg. J. D. S.

6258. Dioscorea propinqua, Hemsl.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4971. Smilax mollis, Willd.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4647. Smilacina flexuosa, Hook.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Apr. 1890. Leg. Heyde et Lux.

4652. Smilacina flexuosa, Hook.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

4644. Anthericum apodastanthum, Donnell Smith

in Botan. Gaz. xix. 265.
San Bártolo, Depart. Zacatepéquez, Guatemala, alt. 5000 pp.
M. Maj. 1890. Leg. Heyde et Lux.

4641. Allium glandulosum, Link et Otto.

determ. Baker.
San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Nov. 1891. Leg. Heyde et Lux.

5510. Pontederia cordata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Mart. 1889. Leg. C. Thieme.

4289. Heteranthera limosa, Vahl.

Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Dec. 1892. Leg. Heyde et Lux.

5511. Heteranthera reniformis, Ruiz et Pav.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

6261. Heteranthera reniformis, Ruiz et Pav.

Rio María Linda, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5534. Commelina Virginica, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Nov. 1888. Leg. C. Thieme.

6393. Dichorisandra Aubletiana, Roem. et Sch.

determ. Clarke.
Atescatempá, Depart. Jutiapa, Guatemala, alt. 3000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

3881. Tinantia fugax, Scheidw.

determ. Clarke.
Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

5961. Tinantia fugax, Scheidw.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

6253. Tinantia fugax, Scheidw.

determ. Clarke.
La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

6392. Tinantia fugax, Scheidw.

determ. Clarke.

Santa Lucía, Depart. Escuintla, Guatemala, alt. 1000 pp.

M. Jan. 1894. Leg. Heyde et Lux.

6250. Tradescantia commelinoides, Roem. et Sch.

determ. Clarke.

Malpais, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5533. Tradescantia cordifolia, Sw.

determ. Clarke.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1889. Leg. C. Thieme.

4725. Tradescantia crassifolia, Cav.

Guatemala, Depart. Guatemala, Guatemala, alt. 5000 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5532. Tradescantia Cumanensis, Kunth.

determ. Clarke.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Dec. 1888. Leg. C. Thieme.

5962. Tradescantia Disgrega, Kunth.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Nov. 1887. Leg. Juan J. Cooper.

6251. Tradescantia Disgrega, Kunth.

determ. Clarke.

Rio María Linda, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4285. Tradescantia elongata, G.F.W.Meyer.

determ. Clarke.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4976. Tradescantia elongata, G.F.W.Meyer.

determ. Clarke.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4649. Tradescantia Guatemalensis, Clarke

in Botan. Gaz. xvii. 210.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Nov. 1889. Leg. Heyde et Lux.

4651. Callisia repens, L.

determ. Clarke.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5531. Callisia repens, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1889. Leg. C. Thieme.

5530. Callisia umbellulata, Lam.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Mart. 1889. Leg. C. Thieme.

5960. Callisia umbellulata, Lam.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Nov. 1887. Leg. Juan J. Cooper.

5535. Campelia Zanonia, H.B.K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Sept. 1888. Leg. C. Thieme.

6394. Leptorhöes filiformis, C. B. Clarke.

determ. Clarke.

Laguna de Ayarza, Depart. Jalapa, Guatemala, alt. 8000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

4648. Zebrina pendula, Schnizl.

determ. Clarke.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Maj. 1893. Leg. Heyde et Lux.

373. Chamædorea Pacaya, Œrst.

Las Ánimas, Depart. Suchitepéquez, Guatemala, alt. 650 pp.
M. Sept. 1891. Leg. W. C. Shannon.

6398. Typha angustifolia, L.

Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

6397. Pistia Stratiotes, L., var. obcordata, Engl.

Laguna de Guija, Depart. Jutiapa, Guatemala, alt. 4000 pp.
M. Apr. 1894. Leg. Heyde et Lux.

3868. Xanthosoma Hoffmanni, Schott.

determ. Engler.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

4280. Xanthosoma Hoffmanni, Schott.

determ. Engler.

Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Aug. 1892. Leg. Heyde et Lux.

165. Xanthosoma roseum, Schott.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

4653. Xanthosoma roseum, Schott.

determ. Engler.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Mart. 1893. Leg. Heyde et Lux.

5963. Philodendron Cooperi, Engl. sp. nov. ined.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

3867. Philodendron Hoffmanni, Schott.

determ. Engler.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4281. Philodendron Hoffmanni, Schott.

determ. Engler.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Nov. 1892. Leg. Heyde et Lux.

4283. Philodendron tripartitum, Schott.

determ. Engler.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4981. Philodendron tripartitum, Schott.

determ. Engler.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4282. Philodendron Warszewiczii, C. Koch et Bouché.

determ. Engler.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4977. Philodendron Wendlandii, Schott.

determ. Engler.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4654. Diffenbachia Seguine, Schott.

determ. Engler.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Mart. 1893. Leg. Heyde et Lux.

4279. Monstera pertusa, de Vriese.

determ. Engler.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

4655. Spathiphyllum Friedrichsthalii, Kunth.

determ. Engler.

Rio La Plata, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jan. 1893. Leg. Heyde et Lux.

5528. Spathiphyllum Wendlandii, Schott.

determ. Engler.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1888. Leg. C. Thieme.

3516. Anthurium quinquenervium, Kunth?

determ. Engler.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4278. Anthurium Salviniæ, Hemsl.

determ. Engler.

Naranjo, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5965. Anthurium scandens, Engl.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Oct. 1887. Leg. Juan J. Cooper.

4982. Anthurium spectabile, Schott.

determ. Engler.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5564. Cyperus diffusus, Vahl.

determ. Clarke.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jan. 1887. Leg. C. Thieme.

5563. Cyperus Luzulæ, Retz.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1887. Leg. C. Thieme.

6263. Cyperus Surinamensis, Rottb.

determ. Clarke.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5990. Mariscus Jacquini, H.B.K.

determ. Clarke.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Apr. 1888. Leg. A. Alfaro.

5567. Mariscus Jacquini, H.B.K., var. angustior, Clarke.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

3890. Mariscus Mutisii, H.B.K.

determ. Clarke.

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Sept. 1892. Leg. Heyde et Lux.

4988. Mariscus Pohlianus, Schrader.

determ. Clarke.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

4989. Mariscus saturatus, Clarke sp. nov. ined.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5568. Kyllinga pumila, Mich.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1890. Leg. C. Thieme.

5571. Eleocharis geniculata, R. Br.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1890. Leg. C. Thieme.

3549. Eleocharis nodulosa, Schultes.

determ. Clarke.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

6264. Eleocharis nodulosa, Schultes.

determ. Clarke.

Canchón, Depart. Santa Rosa, Guatemala, alt. 2000 pp.

M. Oct. 1893. Leg. Heyde et Lux.

3547. Dichromena ciliata, Vahl.

(*Rhynchospora nervosa* et *R. leucocephala*, Boeck.)

determ. Clarke.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Maj. 1892. Leg. Heyde et Lux.

5561^{B}. Dichromena ciliata, Vahl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Aug. 1888. Leg. C. Thieme.

5561. Dichromena radicans, Cham. et Schl.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Jul. 1888. Leg. C. Thieme.

6399. Scirpus micranthus, Vahl.

determ. Clarke.

Atitlan, Depart. Sololá, Guatemala, alt. 1800 pp.

M. Febr. 1894. Leg. Heyde et Lux.

4726. Scirpus riparius, Presl.

Laguna Amatitlan, Depart. Amatitlan, Guatemala, alt. 3900 pp.

M. Maj. 1892. Leg. W. C. Shannon.

5565. Rhynchospora cephalotes, Vahl.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1888. Leg. C. Thieme.

5566. Rhynchospora polyphylla, Vahl.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

6266. Rhynchospora polyphylla, Vahl.

determ. Clarke.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

6265. Scleria hemitaphra, Steud.

determ. Clarke.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5562. Scleria melaleuca, Cham. et Schl.

determ. Clarke.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

4992. Paspalum candidum, H.B.K.

determ. Scribner.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

6271. Paspalum Humboldtianum, Fluegge.

determ. Scribner.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

6403. Paspalum plicatulum, Michx.

determ. Scribner.

San Lucas Tolimán, Depart. Sololá, Guatemala, alt. 1800 pp.
M. Febr. 1894. Leg. Heyde et Lux.

6402. Paspalum virgatum, L., var.

determ. Scribner.

Atescatempa, Depart. Jutiapa, Guatemala, alt. 3000 pp.
M. Sept. 1894. Leg. Heyde et Lux.

5584. Panicum fuscum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Sept. 1888. Leg. C. Thieme.

6404. Panicum fuscum, Sw.

determ. Scribner.

Chicacao, Depart. Sololá, Guatemala, alt. 1500 pp.
M. Febr. 1894. Leg. Heyde et Lux.

4991. Panicum latifolium, L.,
var. (*P. lanatum*, Sw.)
(*P. divaricatum*, L., var. *molle*, Fourn.)

determ. Scribner.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.
M. Mart. 1894. Leg. J. D. S.

6268. Panicum leucophæum, H.B.K.

determ. Scribner.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

2706. Panicum maximum, Jacq.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.
M. Mart. 1892. Leg. J. D. S.

5581. Oplismenus Humboldtianus, Nees.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1887. Leg. C. Thieme.

6276. Oplismenus Humboldtianus, Nees.

determ. Scribner.

San Juan Arana, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1893. Leg. Heyde et Lux.

6275. Oplismenus setarius, Roem. et Sch.

determ. Scribner.

La Vega, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Nov. 1893. Leg. Heyde et Lux.

6269. Chætium bromoides, Benth.

determ. Scribner.

Rio María Linda, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Oct. 1893. Leg. Heyde et Lux.

6401. Setaria effusa, Fourn.

(=n. 456 Liebmann!)

determ. Scribner.

Patulúl, Depart. Sololá, Guatemala, alt. 1300 pp.
M. Jan. 1894. Leg. Heyde et Lux.

3904. Pennisetum caudatum, Kunth.

determ. Scribner.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Sept. 1892. Leg. Heyde et Lux.

6400. Olyra latifolia, L.

Mazatenango, Depart. Suchitepéquez, Guatemala, alt. 1200 pp.
M. Jan. 1894. Leg. Heyde et Lux.

5595[B]. Tripsacum dactyloides, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Mart. 1887. Leg. C. Thieme.

6267. Homalocenchrus hexandrus, O. Kuntze.

(*Leersia hexandra*, Sw.)

determ. Scribner.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Oct. 1893. Leg. Heyde et Lux.

6272. Homalocenchrus hexandrus, O. Kuntze.

(*Leersia hexandra*, Sw.)

determ. Scribner.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

4658. Arundinella Martinicensis, Trin.

determ. Scribner.

Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

6280. Arundinella phragmatoides, Griseb.

determ. Scribner.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6277. Anthephora hermaphrodita, O. Kuntze.

(*A. elegans*, Schreb.)

determ. Scribner.

San Juan Arana, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6278. Andropogon apricus, Trin.

determ. Scribner.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6273. Andropogon bicornis, L.

determ. Scribner.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6279. Andropogon bracteatus, Willd.

determ. Scribner.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

3914. Perieilema crinitum, Presl.

determ. Scribner.

Chupadero, Depart. Santa Rosa, Guatemala, alt. 5000 pp.

M. Oct. 1892. Leg. Heyde et Lux.

6274. Perieilema crinitum, Presl.

determ. Scribner.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6281. Bouteloua bromoides, Lag.

determ. Scribner.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Oct. 1893. Leg. Heyde et Lux.

4659. Pentarrhaphis paupercula, Scribn.

determ. Scribner.

San Bártolo Jocotenango, Depart. Quiche, Guatemala, alt. 4500 pp.

M. Jun. 1890. Leg. Heyde et Lux.

3926. Eleusine Indica, Gaertn.

Chiapas, Depart. Santa Rosa, Guatemala, alt. 3500 pp.
M. Sept. 1892. Leg. Heyde et Lux.

4303. Eragrostis major, Host.

(*Briza Eragrostis*, L.—*Poa multiflora*, Forsk.—*P. megastachya*, Koel.)
determ. Scribner.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Nov. 1892. Leg. Heyde et Lux.

4994. Gleichenia pectinata, Presl.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.
M. Mart. 1894. Leg. J. D. S.

6021. Gleichenia pubescens, H.B.K.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4995. Gleichenia revoluta, H.B.K.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 8000 pp.
M. Mart. 1894. Leg. F. N. Cox.

5637. Cyathea arborea, Sm.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Mart. 1887. Leg. C. Thieme.

5074. Alsophila ferox, Presl.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5638. Alsophila ferox, Presl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jun. 1888. Leg. C. Thieme.

4667. Dicksonia adiantoides, H.B.K.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5639[B]. Dicksonia adiantoides, H.B.K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Oct. 1888. Leg. C. Thieme.

5639. Dicksonia cicutaria, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Sept. 1888. Leg. C. Thieme.

6020. Hymenophyllum microcarpum, Desv.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5072. Hymenophyllum myriocarpum, Hook.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 7500 pp.
M. Mart. 1894. Leg. F. N. Cox.

4661. Hymenophyllum polyanthos, Sw.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.
M. Sept. 1889. Leg. Heyde et Lux.

4998. Trichomanes membranaceum, L.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

4660. Trichomanes radicans, Sw.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5070. Trichomanes radicans, Sw.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5071. Trichomanes venustum, Desv.?

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5101[B]. Trichomanes venustum, Desv.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.
M. Apr. 1894. Leg. J. D. S.

6016. Davallia inæqualis, Kunze.

San José, Prov. San José, Costa Rica, alt. 3400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6033. Cystopteris fragilis, Bernh.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6022. Lindsaya trapeziformis, Dryand.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6023. Lindsaya trapeziformis, Dryand., var. arcuata, Kunze.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1887. Leg. Juan J. Cooper.

6035[B]. Adiantum concinnum, H.B.K.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. A. Alfaro.

5645. Adiantum cristatum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1887. Leg. C. Thieme.

5641. Adiantum intermedium, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1888. Leg. C. Thieme.

5640. Adiantum Kaulfussii, Kunze.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1887. Leg. C. Thieme.

6406. Adiantum lunulatum, Burm.

Mataquescuintla, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

4668. Adiantum macrophyllum, Sw.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5076. Adiantum macrophyllum, Sw.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5643. Adiantum Seemanni, Hook.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Mart. 1889. Leg. C. Thieme.

3210. Adiantum tenerum, Sw.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Maj. 1892. Leg. Heyde et Lux.

5642. Adiantum tenerum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.
M. Maj. 1889. Leg. C. Thieme.

5075. Adiantum tetraphyllum, Willd.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5641^{B}. Adiantum tetraphyllum, Willd.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1888. Leg. C. Thieme.

4669. Adiantum trapeziforme, L.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5644. Adiantum trapeziforme, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Febr. 1887. Leg. C. Thieme.

5647. Adiantum villosum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Oct. 1887. Leg. C. Thieme.

4663. Hypolepis nigrescens, Hook.

Rio Zacualpa, Depart. Quiché, Guatemala, alt. 5000 pp.
M. Maj. 1890. Leg. Heyde et Lux.

6018. Hypolepis nigrescens, Hook.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1887. Leg. Juan J. Cooper.

5073. Hypolepis repens, Presl.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

4692. Cheilanthes farinosa, Kaulf.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1889. Leg. Heyde et Lux.

5077. Cheilanthes lendigera, Sw.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.

M. Apr. 1894. Leg. J. D. S.

5649. Cheilanthes microphylla, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Dec. 1888. Leg. C. Thieme.

4665. Cheilanthes microphylla, Sw., forma elongata.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.

M. Dec. 1889. Leg. Heyde et Lux.

5648. Cheilanthes radiata, R. Br.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Jun. 1888. Leg. C. Thieme.

6282. Pellæa cordata, J. Sm.

Frajanes, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5650. Pteris aquilina, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Maj. 1888. Leg. C. Thieme.

6043. Pteris incisa, Thunb.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4666. Pteris Kunzeana, Agardh.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5652. Pteris Kunzeana, Agardh.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Maj. 1890. Leg. C. Thieme.

6044. Pteris Kunzeana, Agardh.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5651. Pteris quadriaurita, Retz.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.
M. Apr. 1889. Leg. C. Thieme.

6045. Pteris quadriaurita, Retz.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. A. Alfaro.

4997. Blechnum longifolium, H.B.K.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5653. Blechnum longifolium, H.B.K.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Jan. 1887. Leg. C. Thieme.

3206. Blechnum occidentale, L.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5654. Blechnum occidentale, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1887. Leg. C. Thieme.

6025. Blechnum occidentale, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4672. Asplenium abscissum, Willd.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

4677. Asplenium achilleæfolium, Liebm.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

6042. Asplenium arboreum, Willd.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4673. Asplenium arcuatum, Liebm.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5081. Asplenium auritum, Sw.,
forma typica.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Apr. 1894. Leg. J. D. S.

6037$^{B}_{!}$ Asplenium auritum, Sw.

San Jose, Prov. San Jose, Costa Rica, alt. 3400 pp.
M. Mart. 1887. Leg. Juan J. Cooper.

6041$^{B}_{!}$ Asplenium celtidifolium, Kunze.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4674. Asplenium cicutarium, Sw.,
forma fronde deltoidea.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

4675. Asplenium cicutarium, Sw.,
forma fronde elongata, lobis magis serratis.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5675. Asplenium cultrifolium, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Maj. 1888. Leg. C. Thieme.

4678. Asplenium Donnell-Smithii, H. Christ
sp. nov. ined.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.

M. Maj. 1891. Leg. Heyde et Lux.

5678. Asplenium formosum, Willd.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Mart. 1890. Leg. C. Thieme.

5681. Asplenium fragrans, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1200 pp.

M. Mart. 1890. Leg. C. Thieme.

5680. Asplenium Franconis, Mett.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Mart. 1890. Leg. C. Thieme.

6034. Asplenium furcatum, Thunb.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6035. Asplenium furcatum, Thunb.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1887. Leg. A. Alfaro.

6038. Asplenium hastatum, Klotzsch.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6039. Asplenium hastatum, Klotzsch.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Mart. 1888. Leg. Juan J. Cooper.

4676. Asplenium Lindbergii, Mett.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5078. Asplenium Lindbergii, Mett.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

3235[B]. Asplenium lunulatum, Sw.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

4670. Asplenium lunulatum, Sw.,
var. pinnatifidum.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

4671. Asplenium lunulatum, Sw.,
var. pinnatifidum.

Mataquescuintla, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

3223. Asplenium monanthemum, L.

Chiul, Depart. Quiché, Guatemala, alt. 8000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3224. Asplenium monanthemum, L.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5080. Asplenium monanthemum, L.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

4679. Asplenium plantagineum, L.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala,
alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5679. Asplenium plantagineum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Oct. 1888. Leg. C. Thieme.

5676. Asplenium pulchellum, Raddi.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jun. 1888. Leg. C. Thieme.

5659. Asplenium pumilum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Mart. 1890. Leg. C. Thieme.

6285. Asplenium pumilum, Sw.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala,
alt. 2500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5679[B]. Asplenium rhizophorum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.
M. Dec. 1889. Leg. C. Thieme.

6036. Asplenium rhizophorum, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6037. Asplenium rhizophorum, L.,
var. alleopteron, Baker.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1887. Leg. Juan J. Cooper.

5083. Asplenium rhizophorum, L.,
var. rachirizon, Baker.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 7500 pp.
M. Mart. 1894. Leg. F. N. Cox.

5079. Asplenium rhizophyllum, Kunze.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5082. Asplenium Serra, Langs. et Fisch.

Volcan Turrialba, Prov. Cartago, Costa Rica, alt. 7500 pp.
M. Mart. 1894. Leg. F. N. Cox.

6040. Asplenium Serra, Langs. et Fisch.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5683. Asplenium serratum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Febr. 1888. Leg. C. Thieme.

5682. Asplenium Shepherdi, Spreng.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1890. Leg. C. Thieme.

4680. Asplenium Shepherdi, Spreng.,
var. bipinnatum, H. Christ var. nov. ined.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

6409. Asplenium Skinneri, Baker.

Sambrerito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

3237. Aspidium aculeatum, Sw.

Rio Pinula, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5670. Aspidium macrophyllum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Apr. 1887. Leg. C. Thieme.

5096. Aspidium semicordatum, Sw.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5696. Aspidium semicordatum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1300 pp.
M. Apr. 1888. Leg. C. Thieme.

5069. Aspidium trifoliatum, Sw.

Tecoluca, Depart. San Vicente, Salvador, alt. 200 pp.

M. Jan. 1893. Leg. W. C. Shannon.

5092. Aspidium trifoliatum, Sw.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5669. Aspidium trifoliatum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Oct. 1887. Leg. C. Thieme.

2735. Nephrodium amplum, Baker.

San Felipe, Depart. Retalhuleu, Guatemala, alt. 2050 pp.

M. Apr. 1889. Leg. J. D. S.

3249. Nephrodium amplum, Baker.

Rio de Los Esclavos, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Jul. 1892. Leg. Heyde et Lux.

4425. Nephrodium amplum, Baker.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5086. Nephrodium amplum, Baker.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5672. Nephrodium amplum, Baker.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.

M. Maj. 1888. Leg. C. Thieme.

5095. Nephrodium Caripense, Hook.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

2737. Nephrodium cicutarium, Baker.

Escuintla, Depart. Escuintla, Guatemala, alt. 1100 pp.

M. Mart. 1892. Leg. J. D. S.

4423. Nephrodium cicutarium, Baker.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

5671. Nephrodium cicutarium, Baker.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1888. Leg. C. Thieme.

3246. Nephrodium conterminum, Desv.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4683. Nephrodium conterminum, Desv.

(*N. oppositum*, Sw. non aliorum.)

determ. H. Christ.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5085. Nephrodium conterminum, Desv.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

5087. Nephrodium conterminum, Desv.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5088. Nephrodium conterminum, Desv.

Rio Reventazon, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

5089. Nephrodium conterminum, Desv.

Rio Virilla, Prov. San José, Costa Rica, alt. 3200 pp.

M. Mart. 1894. Leg. J. D. S.

5090. Nephrodium conterminum, Desv.

Alajuelita, Prov. San José, Costa Rica, alt. 3300 pp.

M. Mart. 1894. Leg. J. D. S.

5674. Nephrodium conterminum, Desv.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Nov. 1888. Leg. C. Thieme.

6027. Nephrodium conterminum, Desv.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6029. Nephrodium conterminum, Desv.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Mart. 1887. Leg. A. Alfaro.

6286. Nephrodium conterminum, Desv.

Los Verdes, Depart. Amatitlan, Guatemala, alt. 3500 pp.

M. Nov. 1893. Leg. Heyde et Lux.

6032. Nephrodium denticulatum, Hook.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4682. Nephrodium effusum, Baker.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5671[B]. Nephrodium effusum, Baker.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Sept. 1887. Leg. C. Thieme.

6030. Nephrodium effusum, Baker.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Oct. 1887. Leg. Juan J. Cooper.

1556. Nephrodium Fendleri, Hook.,
var. paucipinnatum, Donnell Smith

in Botan. Gaz. xii. 134.
Barranca del Rubelcruz, Depart. Alta Verapaz, Guatemala, alt. 2500 pp.
M. Apr. 1889. Leg. J. D. S.

5097. Nephrodium Harrisoni, Baker

in Ann. Bot. v. 326.
(*N. stenophyllum*, Baker in Journ. Bot. xxii. 363; non Sodiro.)
Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

6405. Nephrodium Karwinskyanum, Baker,
forma grandis.

Mataquescuintla, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

5672[B]. Nephrodium molle, Sw.

San Pedro Sula, Depart. Santa Bárbara, Hondurus, alt. 800 pp.
M. Mart. 1888. Leg. C. Thieme.

6018[B]. Nephrodium molle, Sw.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5646. Nephrodium nigrovenium, H. Christ
sp. nov. ined.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Sept. 1887. Leg. C. Thieme.

3245. Nephrodium patens, Desv.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Maj. 1892. Leg. Heyde et Lux

5698. Nephrodium patens, Desv.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jan. 1887. Leg. C. Thieme.

6050. Nephrodium patens, Desv.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1887. Leg. Juan J. Cooper.

6289. Nephrodium patens, Desv.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Sept. 1893. Leg. Heyde et Lux.

5673. Nephrodium patens, Desv.,
var. invisum, Baker.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Maj. 1888. Leg. C. Thieme.

5670[B]. Nephrodium patulum, Baker.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.
M. Jan. 1889. Leg. C. Thieme.

6031. Nephrodium patulum, Baker.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. A. Alfaro.

6408. Nephrodium patulum, Baker.

Sambrerito, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

6407. Nephrodium sphærocarpum, Hook.

Mataquescuintla, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Mart. 1894. Leg. Heyde et Lux.

5666. Nephrolepis acuta, Presl.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Jan. 1887. Leg. C. Thieme.

5665. Nephrolepis cordifolia, Presl.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Maj. 1888. Leg. C. Thieme.

4687. Polypodium angustifolium, Sw.

Embaulada, Depart. Zacatepéquez, Guatemala, alt. 5500 pp.
M. Dec. 1889. Leg. Heyde et Lux.

4690. Polypodium angustifolium, Sw.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.
M. Nov. 1891. Leg. Heyde et Lux.

6053. Polypodium angustifolium, Sw.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

2740. Polypodium angustum, Mett.

San Rafael, Depart. Zacatepéquez, Guatemala, alt. 6500 pp.
M. Febr. 1892. Leg. J. D. S.

4088. Polypodium angustum, Mett.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Nov. 1892. Leg. Heyde et Lux.

5689. Polypodium Brasiliense, Poir.

(*P. neriifolium*, Schk.)

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1300 pp.
M. Febr. 1887. Leg. C. Thieme.

6287. Polypodium Brasiliense, Poir.

(*P. neriifolium*, Schk.)

Las Marías, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Sept. 1893. Leg. Heyde et Lux.

6046. Polypodium crassifolium, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5686. Polypodium crenatum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 900 pp.
M. Nov. 1888. Leg. C. Thieme.

4686. Polypodium cultratum, Willd.,
var. elasticum, Baker.
(*P. senile*, Fée.)

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 11,000 pp.
M. Nov. 1890. Leg. Heyde et Lux.

5687. Polypodium decumanum, Willd.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Oct. 1887. Leg. C. Thieme.

5091. Polypodium elasticum, Rich.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.
M. Mart. 1894. Leg. J. D. S.

6056. Polypodium elasticum, Rich.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. A. Alfaro.

6049. Polypodium fraxinifolium, Jacq.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

5100. Polypodium Friedrichsthalianum, Kunze.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1894. Leg. J. D. S.

6051. Polypodium Friedrichsthalianum, Kunze.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1887. Leg. Juan J. Cooper.

4662. Polypodium Hemsleyanum, Baker.

Zamorora, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Apr. 1893. Leg. Heyde et Lux.

5684. Polypodium incanum, Sw.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Maj. 1888. Leg. C. Thieme.

4688. Polypodium lanceolatum, L.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1889. Leg. Heyde et Lux.

4689. Polypodium lepidopteris, Kunze,
var. (*P. sepultum*, Kaulf.)

Villa Nueva, Depart. Amatitlan, Guatemala, alt. 3500 pp.
M. Dec. 1889. Leg. Heyde et Lux.

5101. Polypodium loriceum, L.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

6048. Polypodium loriceum, L.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5688. Polypodium lycopodioides, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Mart. 1888. Leg. C. Thieme.

5685. Polypodium obliteratum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1400 pp.

M. Nov. 1887. Leg. C. Thieme.

5692. Polypodium pectinatum, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Jun. 1888. Leg. C. Thieme.

6057. Polypodium pectinatum, L.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5691. Polypodium Phyllitidis, L.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Jun. 1887. Leg. C. Thieme.

6058. Polypodium Phyllitidis, L.,

forma luxurians, fronde tota laciniis linearibus usque ad medium fimbriato-fida.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Mart. 1887. Leg. A. Alfaro.

6059. Polypodium Phyllitidis, L.,

forma luxurians, fronde tota laciniis linearibus usque ad medium fimbriato-fida.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1887. Leg. A. Alfaro.

6054. Polypodium plebeium, Schlecht.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

3260. Polypodium plesiosorum, Kunze.

Los Bordes, Depart. Santa Rosa, Guatemala, alt. 3500 pp.

M. Apr. 1892. Leg. Heyde et Lux.

4089[B]. Polypodium Skinneri, Hook.

San Juan Utapa, Depart. Santa Rosa, Guatemala, alt. 4500 pp.

M. Nov. 1892. Leg. Heyde et Lux.

5098. Polypodium Skinneri, Hook.

Navarro, Prov. Cartago, Costa Rica, alt. 3500 pp.

M. Mart. 1894. Leg. J. D. S.

5099. Polypodium Skinneri, Hook.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

6047. Polypodium Skinneri, Hook.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

6288. Polypodium Skinneri, Hook.

Cerro Redondo, Depart. Santa Rosa, Guatemala. alt. 4500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

5094. Polypodium tetragonum, Sw.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5693. Polypodium tetragonum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Jun. 1883. Leg. C. Thieme.

4685. Polypodium tetragonum, Sw., var. megalodus, Schk.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5093. Polypodium tetragonum, Sw., var. megalodus, Schk.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

4664. Notholæna ferruginea, Hook.

Volcan de Fuego, Depart. Zacatepéquez, Guatemala, alt. 9000 pp.

M. Nov. 1889. Leg. Heyde et Lux.

6284. Notholæna ferruginea, Hook.

Cuajiniquilapa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Apr. 1893. Leg. Heyde et Lux.

3204. Gymnogramme calomelanos, Kaulf.

Barberena, Depart. Santa Rosa, Guatemala, alt. 3000 pp.

M. Jun. 1892. Leg. Heyde et Lux.

4691. Gymnogramme calomelanos, Kaulf.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala, alt. 6500 pp.

M. Febr. 1893. Leg. Heyde et Lux.

5658. Gymnogramme calomelanos, Kaulf.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1500 pp.

M. Maj. 1888. Leg. C. Thieme.

6014[B] Gymnogramme calomelanos, Kaulf.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Oct. 1888. Leg. A. Alfaro.

4418. Gymnogramme calomelanos, Kaulf.,
var. Peruviana, Baker.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Jan. 1893. Leg. Heyde et Lux.

6026. Gymnogramme elongata, Hook.

San José, Prov. San José, Costa Rica, alt. 3400 pp.

M. Mart. 1887. Leg. A. Alfaro.

4999. Gymnogramme flexuosa, Desv.

Volcan Irazú, Prov. Cartago, Costa Rica, alt. 8000 pp.

M. Mart. 1894. Leg. J. D. S.

6015. Gymnogramme flexuosa, Desv.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5657. Gymnogramme rufa, Desv.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.

M. Mart. 1890. Leg. C. Thieme.

5084. Gymnogramme sciatraphis, Donnell Smith

in Botan. Gaz. xix. 266, t. xxvi.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5656. Gymnogramme tartarea, Desv.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1600 pp.

M. Maj. 1888. Leg. C. Thieme.

6016[B]. Gymnogramme tartarea, Desv.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.

M. Mart. 1887. Leg. A. Alfaro.

4993. Gymnogramme trifoliata, Desv.

Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1600 pp.

M. Mart. 1894. Leg. J. D. S.

5660. Meniscium reticulatum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.

M. Jun. 1888. Leg. C. Thieme.

5695. Meniscium serratum, Cav.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Mart. 1890. Leg. C. Thieme.

6019. Antrophyum subsessile, Kunze.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

4996. Vittaria lineata, Sw.

Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.

M. Apr. 1894. Leg. J. D. S.

5699B. Vittaria lineata, Sw.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Mart. 1888. Leg. C. Thieme.

6063. Vittaria lineata, Sw.

Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Mart. 1888. Leg. A. Alfaro.

5655. Hemionitis palmata, L.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jul. 1888. Leg. C. Thieme.

6283. Hemionitis pinnatifida, Baker.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Jul. 1893. Leg. Heyde et Lux.

4694. Acrostichum alienum, Sw.

Joyabáj, Depart. Quiché, Guatemala, alt. 4500 pp.
M. Apr. 1890. Leg. Heyde et Lux.

4695. Acrostichum alienum, Sw.

Volcan Tecuamburro, Depart. Santa Rosa, Guatemala,
alt. 6000 pp.
M. Febr. 1893. Leg. Heyde et Lux.

5668. Acrostichum alienum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Maj. 1888. Leg. C. Thieme.

6290. Acrostichum alienum, Sw.

Cerro Redondo, Depart. Santa Rosa, Guatemala, alt. 4500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

5667. Acrostichum latifolium, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Oct. 1887. Leg. C. Thieme.

6024B. Acrostichum Matthewsii, Fée.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

6046B. Acrostichum peltatum, Sw.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4696. Acrostichum villosum, Sw.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 10,000 pp.
M. Sept. 1889. Leg. Heyde et Lux.

5664B. Aneimia hirsuta, Sw.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

5664. Aneimia rotundifolia, Schrad.

Rio Permejo, Depart. Santa Bárbara, Honduras, alt. 600 pp.
M. Dec. 1888. Leg. C. Thieme.

5663. Lygodium heterodoxum, Kunze.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Mart. 1888. Leg. C. Thieme.

5662. Lygodium venustum, Sw.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Jan. 1887. Leg. C. Thieme.

6291. Lygodium venustum, Sw.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

6410. Lygodium venustum, Sw.

Canóas, Depart. Jutiapa, Guatemala, alt. 2500 pp.
M. Apr. 1894. Leg. Heyde et Lux.

5661. Danæa elliptica, Sm.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Oct. 1888. Leg. C. Thieme.

5108. Equisetum Bogotense, H.B.K.

Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Apr. 1894. Leg. J. D. S.

6060. Lycopodium clavatum, L.,

var. (*L. trichiatum*, Bory.)

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

5104. Selaginella anceps, A. Br.

determ. H. Christ.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

5106. Selaginella anceps, A. Br.

determ. H. Christ.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.
M. Apr. 1894. Leg. J. D. S.

6061. Selaginella cuspidata, Link.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Dec. 1887. Leg. Juan J. Cooper.

128. Selaginella Galeottii, Spring.

Santa Bárbara, Depart. Sololá, Guatemala, alt. 1370 pp.
M. Aug. 1891. Leg. W. C. Shannon.

129. Selaginella Galeottii, Spring.

Primavera, Depart. Sololá, Guatemala, alt. 760 pp.
M. Jul. 1891. Leg. W. C. Shannon.

5102. Selaginella lepidophylla, Spring.

determ. H. Christ.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1804. Leg. J. D. S.

5701. Selaginella Martensii, Spring.

determ. H. Christ.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 600 pp.

M. Apr. 1888. Leg. C. Thieme.

6062. Selaginella Martensii, Spring.

determ. H. Christ.

Estrella, Prov. Cartago, Costa Rica, alt. 4400 pp.

M. Apr. 1888. Leg. Juan J. Cooper.

5106[B]. Selaginella Nicaraguensis, Baker.

determ. H. Christ.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5107. Selaginella Nicaraguensis, Baker.

determ. H. Christ.

Guápiles, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 850 pp.

M. Apr. 1894. Leg. J. D. S.

5105. Selaginella Oaxacana, Spring?

determ. H. Christ.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.

M. Apr. 1894. Leg. J. D. S.

5103. Selaginella Schiedeana, A. Br.

determ. H. Christ.

Atirro, Prov. Cartago, Costa Rica, alt. 2000 pp.

M. Mart. 1894. Leg. J. D. S.

5700. Selaginella viticulosa, Klotzsch.

determ. H. Christ.

Rio Permejo, Depart. Santa Bírbara, Honduras, alt. 600 pp.

M. Apr. 1888. Leg. C. Thieme.

4697. Salvinia auriculata, Aubl.

Volcan Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.

M. Dec. 1892. Leg. Heyde et Lux.

6293. Marchantia chenopoda, L.

determ. Underwood.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

6292. Aytonia intermedia, Underwood.

(*Plagiochasma intermedia*, L. et J.)

determ. Underwood.

Guachipilín, Depart. Santa Rosa, Guatemala, alt. 2500 pp.

M. Sept. 1893. Leg. Heyde et Lux.

ADDITAMENTA.

4444. Drymaria glandulosa, Bartl.

Nebáj, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1890. Leg. Heyde et Lux.

5175. Trichilia Havanensis, Jacq.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Jan. 1886. Leg. C. Thieme.

5728. Rhus juglandifolia, Kunth, forma.

Nomen vernaculum *Inchador*.
Rio Reventado, Prov. Cartago, Costa Rica, alt. 6000 pp.
M. Mart. 1887. Leg. Juan J. Cooper.

4152. Cassia foliolosa, Benth.

determ. Micheli.
Carrizal, Depart. Santa Rosa, Guatemala, alt. 5000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

3966. Begonia biserrata, Lindl.

determ. C. de Candolle.
Jumaytepeque, Depart. Santa Rosa, Guatemala, alt. 6000 pp.
M. Aug. 1893. Leg. Heyde et Lux.

4817. Begonia conchæfolia, Dietr.

determ. C. de Candolle.
Agua Caliente, Prov. Cartago, Costa Rica, alt. 3900 pp.
M. Mart. 1894. Leg. J. D. S.

5780. Begonia conchæfolia, Dietr.

determ. C. de Candolle.
Alajuela, Prov. Alajuela, Costa Rica, alt. 2700 pp.
M. Febr. 1887. Leg. A. Alfaro.

5778. Begonia Cooperi, C. DC. sp. nov. ined.

Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Mart. 1888. Leg. Juan J. Cooper.

5779. Begonia Estrellensis, C. DC. sp. nov. ined.

Estrella, Prov. Cartago, Costa Rica, alt. 4000 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

4191. Begonia glandulosa, A. DC.

determ. C. de Candolle.
Buena Vista, Depart. Santa Rosa, Guatemala, alt. 5500 pp.
M. Nov. 1893. Leg. Heyde et Lux.

279. Begonia glandulosa, A. DC.?

determ. C. de Candolle.
Cuyotenango, Depart. Suchitepéquez, Guatemala, alt. 1100 pp.
M. Oct. 1891. Leg. W. C. Shannon.

4814. Begonia Guyanensis, A. DC., var. glaberrima, C. DC. var. nov. ined.

Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650 pp.
M. Apr. 1894. Leg. J. D. S.

4190. Begonia heracleifolia, Cham. et Schl.

determ. C. de Candolle.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4000 pp.
M. Jan. 1893. Leg. Heyde et Lux.

3094. Begonia Heydei, C. DC. sp. nov. ined.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 7000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

5777. Begonia Lindleyana, Walp.?

determ. C. de Candolle.
Cartago, Prov. Cartago, Costa Rica, alt. 4250 pp.
M. Apr. 1888. Leg. Juan J. Cooper.

3095. Begonia Luxii, C. DC. sp. nov. ined.

San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6000 pp.
M. Apr. 1892. Leg. Heyde et Lux.

3627. Begonia Luxii, C. DC. sp. nov. ined.

Volcan de Agua, Depart. Zacatepéquez, Guatemala, alt. 7000 pp.
M. Jun. 1892. Leg. W. C. Shannon.

5240. Begonia Thiemei, C. DC. sp. nov. ined.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 800 pp.
M. Mart. 1888. Leg. C. Thieme.

3093. Begonia Tovarensis, Klotzsch.

determ. C. de Candolle.
Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3000 pp.
M. Jun. 1892. Leg. Heyde et Lux.

5239. Begonia Tovarensis, Klotzsch.

determ. C. de Candolle.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Mart. 1889. Leg. C. Thieme.

225. Begonia trichosepala, C. DC. sp. nov. ined.

Pansamalá, Depart. Alta Verapaz, Guatemala, alt. 3800 pp.
M. Jan. 1887. Leg. von Türckheim.

1469. Begonia verisimiliter nova B. strigosæ, Lindl., affinis.

determ. C. de Candolle.

Rio Samalá, Depart. Retalhuleu, Guatemala, alt. 1700 pp.
M. Apr. 1892. Leg. J. D. S.

5238. Begonia verisimiliter nova e sectione Gireoudia, A.DC.

determ. C. de Candolle.

San Pedro Sula, Depart. Santa Bárbara, Honduras, alt. 1000 pp.
M. Febr. 1887. Leg. C. Thieme.

186. Begonia e sectione Gireoudia, A. DC.

determ. C. de Candolle.

San Martín, Depart. Retalhuleu, Guatemala, alt. 1250 pp.
M. Oct. 1891. Leg. W. C. Shannon.

215. Begonia e sectione Gireoudia, A. DC.

determ. C. de Candolle.

San Sebastián, Depart. Retalhuleu, Guatemala, alt. 1000 pp.
M. Oct. 1891. Leg. W. C. Shannon.

APPENDIX.

NOMINA INSERENDA.

461. Ranunculus pilosus, H. B. K.

2789. Cochlospermum hibiscoides, Kunth.

136. Polygala Vogtii, Chod.
Monogr. Polyg. ii. 144. t. xx. fig. 25–26.

3004. Polygala Vogtii, Chod.
Monogr. Polyg. ii. 144. t. xx. fig. 25–26.

374. Stellaria ovata, Willd.

3938. Stellaria prostrata, Baldw.

2606. Clusia minor, L.

1669. Oxalis divergens, Benth.

1440. Oxalis pentantha, Jacq.

1908. Trichilia Donnell-Smithii, C. DC.
in Botan. Gaz. xix. 2.

2504. Trichilia Donnell-Smithii, C. DC.
in Botan. Gaz. xix. 2.

1909. Trichilia Donnell-Smithii, C. DC.,
var. uniovulata, C. DC.
in Botan. Gaz. xix. 3.

1153. Serjania psilophylla, Radlk.
in Botan. Gaz. xvi. 191.

1820. Casearia Javitensis, H. B. K.

1858. Lopezia hirsuta, Jacq.

840. Begonia convallariodora, C. DC. sp. nov. ined.

885. Begonia Tuerckheimii, C. DC. sp. nov. ined.

3690. Aplopappus stoloniferus, DC.,
var. glabratus, Coult.
in Botan. Gaz. xvi. 98.

3796. Jægeria hirta, Less.
(*Spilanthes sessilifolia*, Hemsl.)
determ. Coulter.

3793. Cosmos bipinnatus, Cav.,
var. exaristatus, DC.
determ. Coulter.

3792. Coreopsis Galeottii, Hemsl.
determ. Coulter.

3788. Bidens Andicola, H.B.K.
determ. Coulter.

1598. Senecio Ghiesbreghtii, Hort. Hal. Reg.,
var. Uspantanensis, Coult.
in Botan. Gaz. xx. 52.

728. Centropogon Guatemalensis, Robinson
in Botan. Gaz. xx. 4.

941. Cavendishia callista, Donnell Smith
in Botan. Gaz. xx. 5. t. ii.

1935. Lœselia ciliata, L.

1537. Parathesis crenulata, Hook.,
var. ferruginea, Œrst.

2260. Solanum Antiguense, Coult. sp. nov. ined.

1134. Bassovia macrophylla, Benth. et Hook.
determ. Coulter.

1841. Bassovia macrophylla, Benth. et Hook.
determ. Coulter.

1030. Spathacanthus Donnell-Smithianus, Lindau
in Bull. Herb. Boiss. iii. 371.

3114. Jacobinia tinctoria, Hemsl.

1955. Lantana velutina, Mart. et Gal.

4393. Hyptis urticoides, H.B.K.

1911. Salvia Mocinoi, Benth.

1230. Pisonia macranthocarpa, Donnell Smith
in Botan. Gaz. xx. 293.

2091. Pisonia macranthocarpa, Donnell Smith
in Botan. Gaz. xx. 293.

416. Gomphrena Tuerckheimii, Uline et Bray
in Botan. Gaz. xx. 161.
(*Telanthera Turckheimii*, Vatke in herb.)

127. Amaranthus hybridus, L.

1039. Daphnopsis Tuerckheimiana, Donnell Smith
in Botan. Gaz. xvi. 13.

2049. Marathrum Schiedeanum, Cham.

1962. Acalypha Cancana, Muell. Arg.

1242. Acalypha Lotsii, Donnell Smith sp. nov. ined.

939. Pilea Pansamalana, Donnell Smith
in Botan. Gaz. xix. 10.

754. Pilea pleuroneura, Donnell Smith
in Botan. Gaz. xix. 12.

1040. Pilea riparia, Donnell Smith
in Botan. Gaz. xix. 11.

1891. Cupressus Lindleyi, Klotzsch.

1951. Tillandsia Caput-Medusæ, E. Morr.

1173. Tillandsia punctulata, Schlecht.

1172. Tillandsia variegata, Schlecht.

3869. Dioscorea dicranandra, Donnell Smith
in Botan. Gaz. xix. 13.

3526. Smilax rotundifolia, L.
determ. Morong.

2787. Xanthosoma roseum, Schott.

431. Juncus marginatus, Rostk.,
var. aristulatus, Coville
in Proc. Biol. Soc. Wash. viii. 123.

3193. Gymnogramme calomelanos, Kaulf.,
var. Peruviana, Baker.

4100. Gymnogramme tartarea, Desv.

2447. Asplenium Bertolonii, Donnell Smith.
(*A. polyphyllum*, Bertol. non Presl.)

2446. Asplenium Bertolonii, Donnell Smith,
(*A. polyphyllum*, Bertol. non Presl),
var. podariophorum, Donnell Smith var. nov. ined.

630. Asplenium cultrifolium, L.

3236. Asplenium semihastatum, Kunze.

3240. Asplenium Shepherdi, Spreng.

2744. Polypodium Bernoullii, Baker.

3257. Polypodium lepidopteris, Kunze.

[From the Botanical Gazette, Vol. XIX.]

Undescribed plants from Guatemala. XII.

JOHN DONNELL SMITH.

WITH PLATES I AND II.

M. Casimir de Candolle has contributed to this article diagnoses and descriptions of new species among the MELIACEÆ and PIPERACEÆ submitted to him for elaboration.

Peltostigma pentaphyllum.—Petioles half to two-thirds as long as leaves; leaflets 5, obovate-oblong to elliptical-oblong (6–8 × 2–2.5^{in}), the exterior pair reduced, acuminate, tapering to petiolule, entire: peduncle with 3-flowered cyme subequalling petiole, pedicels ebracteate: sepals chiefly 4; 2 exterior herbaceous, ovate (1–2^{l}): petals chiefly 5, exceeding interior sepal (8^{l}): ovary 7–10-locular, truncate-conic, as broad as gynophore (3^{l}); stigmas before anthesis sacciform, oval (1.5 × 1^{l}); capsule globose, the matured not seen.—A tree 15–21^{ft} high with spreading branches. *P. pteleoides* Walp., which has been the monotype of the genus, and recorded only from Jamaica, differs by short petioles, ternate smaller leaflets, compound inflorescence equalling leaves, smaller flowers, less numerous and less unequal parts of perianth.—Zamorora, Depart. Santa Rosa, alt. 5,500^{ft}, March 1892 and April 1893, Heyde & Lux, (ex Pl. Guatemal. qu. edid. J. D. S. 3,058 and 4,437).

Cabralea insignis C. DC.—Foliis maximis modice petiolatis abrupto-pinnatis 19-jugis, foliolis oppositis sessilibus anguste oblongis basi æquali subacutis obtusisve apice obtusiuscule cuspidatis utrinque glabris, nervis secundariis subpatulis tenuibus utrinque 25 et plus, fructu globoso glabro loculis monospermis.—Arbor? Folium totum ad 65^{cm} longum. Foliola ad 14.5^{cm} longa 2.5^{cm} lata in sicco membranacea sub-

pellucida læte virescentia subtiliter pellucido-punctulata verruculis porosis destituta. Rhachis teres. Petiolus 10^{cm} longus. Fructus indehiscens circiter 4.5^{cm} in diametro, lævis in sicco fuscescens. Semina elliptica circiter 18^{mm} longa. Cotyledones carnosi coriacei elliptici, radicula intra cotyledones immersa.—Species magnitudine foliorum insignis, *C. pallescentis* C. DC. subaffinis.—Acatepeque, Depart. Zacatepequez, alt. 4,300^{ft}, March 1892, J. D. S., no. 2,570.

Guarea Luxii C. DC.—Foliis modice petiolatis 3-jugis, foliolis brevissime petiolulatis oppositis lanceolatis subæqualibus supra glabris subtus junioribus adpresse pilosulis cito glabris, rhachi adpresse hirsuta, paniculis quam folii dimidium brevioribus simplicibus modice pedunculatis spicatim cymuligeris, floribus longiuscule pedicellatis, calyce cupuliformi extus adpresse hirtello margine brevissime acute 4-denticulato, petalis glabris oblongis apice acutis, tubo glabro cylindrico margine obtuse 8-crenulato, antheris oblongis glabris, ovario glabro ovato stipitem superante apice in stylum glabrum attenuato.—Frutex aut arbor 4–6^{m} alta, ramulis junioribus adpresse pubescentibus cito glabris lævibus subcinerascentibus, fructiferis in sicco circiter 2^{mm} crassis. Foliola in sicco membranacea firmulave subpellucida crebre minute pellucido-punctulata ad 9.5^{cm} longa et ad 3^{cm} lata, nervis secundariis subpatulis tenuibus utrinque circiter 15. Petioluli vix 2^{mm} longi. Petioli ad 5^{cm} longi. Flores circiter 3^{mm} longi. Petala 4 æstivatione valvata in sicco rubescentia. Antheræ 8 tubi denticulis oppositæ parvæ. Ovarium 4-loculare loculis uniovulatis. Capsula in specimine nondum matura subglobosa glabra circiter 12^{mm} longa.—Species *G. pedicellatæ* C. DC. et *G. Shomburgkii* C. DC. affinis.—S. Rosa, Depart. S. Rosa, alt. 3,000^{ft}, March 1892, Heyde & Lux, no. 3,276.

Trichilia Donnell-Smithii C. DC.—Foliis modice petiolatis 4–5-jugis, foliolis breviter petiolulatis plerumque oppositis subæqualibus e basi cuneata obovato-oblongis apice rotundatis obtusisve vel breviter obtusiuscule acuminatis utrinque breviter haud dense pilosulis, paniculis e basi decompositis quam petioli brevioribus, floribus longiuscule pedicellatis, calyce acute profunde 5-dentato extus dense hirtello, petalis 5 extus adpresse hirtellis ellipticis apice subacutis, staminibus medium usque in tubum urceolatum glabrum connatis sursum laciniosis laciniis utrinque pilosis apice acute 2-dentatis, an

theris 10 glabris oblongis apice acutis, ovario globoso glabro in disco carnoso glabro subcupuliformi insidente 3-loculari, loculis 2-ovulatis, capsulæ glabræ 3-valvatæ loculis monospermis, seminibus ellipticis arilloque rubris.—Ramuli juniores hirsuti dein subglabri in sicco fuscescentes elenticellosi. Folia ad 16^{cm} longa. Foliola ad 8^{cm} longa ad 2.5^{cm} lata in sicco firma subopaca epunctata, nervis secundariis plerumque alternis subadscendentibus utrinque circiter 8–10. Rhachis cum petiolo 3^{cm} longo teres hirtella. Floris pedicellus 2^{mm} longus. Petala 9^{mm} longa in sicco flavicantia. Antheræ inter laciniarum dentes sessiles. Ovarii loculi oppositisepali, ovulis superpositis. Stylus glaber ovario æquilongus. Seminis testa dura. Embryo intra perispermium album carnosum inclusus, cotyledonibus foliaceis elliptico-rotundatis basi breviter cordulatis, radicula exserta brevi, plumula minima. —Species quoad floris structuram in sectione EUTRICHILIA *(C.DC. monogr.)* collocanda sed propter semen perispermium includens ab omnibus Trichiliis quorum fructus notus discrepans.—Laguna Amatitlan, Depart. Amatitlan, alt. 3,900^{ft}, March 1890, J. D. S., no. 1,908; Volcan de Fuego, Depart. Zacatepequez, alt. 5,500^{ft}, March 1892, J. D. S., 2,504.

Var. *β.* **Uniovulata** C. DC.—Staminum laciniis extus glabris, ovarii loculi uniovulati. —Folia inferiora 1–2-juga cum impari foliolis lateralibus multum majore ad 9^{cm} longo et ad 5^{cm} lato, superiora ut in specie.—Guarda Viejo, Depart. Guatemala, alt. 5,000^{ft}, Febr. 1890, J. D. S., no. 1,909.

Trichilia Heydeana C. DC. —Foliis modice petiolatis 3–4-jugis, foliolis subæqualibus brevissime petiolulatis lanceolato-oblongis basi æquali acutis apice obtuse cuspidatis supra puberulis subtus dense molliter fulvescente-pubescentibus paniculis quam folia multum brevioribus dense pubescentibus, fere a basi ramosis, floribus breviter pedicellatis, calyce extus dense pubescente profunde acute 5-dentato, petalis 5 extus pubescentibus lanceolatis, staminibus inferne in tubum brevem glabrum cum disco connatum coalitis sursum laciniosis laciniis apice obtusis utrinque et intus densius hirsutis, antheris hirtellis avatis apice acutis, ovario disco lato supra villoso insidente villose 3-loculari.—Arbor 10–12^{m} alta. Ramuli juniores adpresse fulvescente-hirsuti, dein glabri in sicco fuscescentes lenticellis concoloribus. Limbi ad 12^{cm} longi ad 4.5^{cm} lati in sicco subcoriacei opaci crebre pellucido-punctulati, nervis secundariis utrinque circiter 12 patule subadscendentibus.

Petioli ad 2^{mm} longi. Rhachis cum petiolo 3^{cm} longo teres dense fulvescente-hirsuta. Paniculæ rami ad 7^{cm} longi fere a medio brevissime ramulosi, ramulis apice dense cymuligeris. Florum pedicelli 1^{mm} parum superantes. Alabastra subglobosa. Calycis dentes lanceolati. Petala circiter 2^{mm} longa in æstivatione imbricata. Antheræ 10 lacinias subæquantes.—Species *T. Wawranæ* C. DC. et *T. Glaziovii* C. DC. affinis.—Naranjo, Depart. Escuintla, alt. 300^{ft}, March 1892, J. D. S., no. 2,574; Rio Esclavos, Depart. S. Rosa, alt. 3,000^{ft}, May 1892, Heyde & Lux, no. 3,274; S. Rosa, alt. 3,000^{ft}, May 1892, Heyde & Lux, no. 3,275.

Cedrela impari-pinnata C. DC. — Foliis longe petiolatis impari-pinnatis 3–5-jugis, foliolis lanceolatis basi æquali acutis apice acute acuminatis subæqualibus utrinque puberulis lateralibus oppositis subsessilibus rhachi puberula, capsula oblonga glabra 4-valvata seminibus elliptico-oblongis.—Ramuli juniores puberuli dein glabri læves in sicco fuscescentes, cortice tenui. Folia cum impari ad 34^{cm} longa. Foliola in sicco membranacea subpellucida subtiliter pellucido-punctulata ad 8^{cm} longa ad 3^{cm} lata, nervis secundariis subpatulis utrinque circiter 12. Capsula circiter 5^{cm} longa valvis lanceolatis medio circiter 12^{mm} latio. Semen cum ala 3^{cm} longum, ala tenuissima. Species foliis impari-pinnatis insignis, *C. Velloziana* Rœm. quoad foliorum formam affinis.—Volcan de Fuego, alt. 6,000^{ft}, March 1892, J. D. S., no. 2,571.

Oreopanax Taubertianum.—Primordial leaves broadly triangular; petioles robust, base abruptly broadly dilated and amplexicaul; leaflets digitately 5–9, chiefly 7, obovate-elliptical (6–9×2–3^{in}), acutely acuminate, tapering to petiolule, coarsely and sharply toothed above middle, membranaceous, upper surface furfuraceous or glabrate, the lower stellate-pubescent, areolation minute and pellucid-punctulate: staminate racemes elongated (16–24^{in}), curving; pedicels pubescent, crowded, slender, thrice exceeding small (3^{l}) globose heads; petals 4–5, shorter than filaments, twice longer than single style; bracteoles surpassing ovary by their pubescent tips, the subtending one narrowly obovate; abortive ovary shortly obpyramidate: fruiting racemes somewhat shorter, pedicels longer (9-15^{l}), heads 5–12-baccate; berries ovoid, crowned with 5 semiconnate styles, by abortion 2–5-celled and with as many or fewer nucules, albumen ruminate.—Compared in the Berlin Herbarium by Dr. Taubert with specimens, authenticated

by M. Marchal, of *O. Xalapense* Dcne et Planch. The only other species described with digitate leaflets, *O. Thibautii* Hook. f., is reduced by M. Marchal to a form of *O. Xalapense* (cf. Bull. Soc. Roy. Bot. Belg. **30**: 282).—A tree 30–40^{ft} high with branchlets half-encircled by the scars of fallen leaves, known to the natives as *Mata-gente*.—Barranca de Corona, Depart. Guatemala, alt. 4,700^{ft}, Febr. 1890 and 1892, J. D. S., nos. 1,905 and 2,664; S. Rosa, alt. 4,000^{ft}, March 1892, Heyde & Lux, no. 3,096; Chiapas, Depart. S. Rosa, alt. 3,500^{ft}, Sept. 1892, Heyde & Lux, no. 3,967.

Ardisia paschalis.—Glabrous: leaves obovate or elliptical (6–7.5 × 3–3.5^{in}), obtuse, narrowing to short canaliculate marginate petiole, entire, coriaceous, nitid, rubro-punctate and -striolate: panicle terminal, exceeding leaves; flowers racemose on primary branches, single, 5-merous, rubro-maculate, pedicels longer and in fruit nodding: divisions of calyx convolute, round-ovate (1.5^{l}): corolla in præfloration dextrorsely contorted, yellowish-white, the conspicous stellate centre thickened by dark-yellow pigment-cells, tube minute (half a line) and equalling explanate throat, obtuse segments oblong (4^{l}) and revolute: stamens slightly monadelphous at apex of tube; anthers ovoid-oblong (2^{l}), twice exceeding filaments, apiculate, before anthesis cohering in a cone by longitudinal sutures of of dehiscence: ovary ovoid, style filiform: fruit pisiform (3–4^{l}), endocarp crustaceous.—A shrub 6–9^{ft} high, with fragrant and showy flowers that are singularly large for the genus, called by the natives *Chilil*, and used during Easter week for decorating the altars of the churches.—Cuyotenango, Depart. Suchitepequez, alt. 1,100^{ft}, April 1892, J. D. S., no. 2,465; S. Rosa, alt. 3,000^{ft}, May 1892, Heyde & Lux, no. 3,023; Cerro Gordo, Depart. S. Rosa, alt. 3,500^{ft}, Sept. 1892, Heyde & Lux, no. 3,988; Casillas, Depart. S. Rosa, alt. 4,000^{ft}, May 1893, Heyde & Lux, no. 4,537. Collected also along Rio Permejo, S. Pedro Sula, Honduras, July 1887, by Dr. C. Thieme.

EXPLANATION OF PLATE I.—Fig. 1, branch with flowers. Fig. 2, branch with fruit. Fig. 3, portion of leaf. Fig. 4, flower-bud. Fig. 5, open flower. Fig. 6, stamens. Fig. 7, pistil. Fig. 8, half of a corolla with stamens. Fig. 9, vertical section of fruit. (Figs. 1 and 2 are natural size; in the others the objects are variously enlarged.)

Piper Luxii C. DC. (§ III. STEFFENSIA C. DC.)—Foliis modice petiolatis elliptico-lanceolatis basi inæquali acutis supra præsertim ad nervos subtusque densius breviter hirsutis,

nervo centrali vix ad $\frac{1}{2}$ longitudinis suæ nervos adscendentes utrinque 5 mittente, petiolo hirsuto basi vaginante, pedunculo quam petiolus breviore, amento ipso per anthesin limbi dimidium vix æquante apice mucronato, bractea obovato-oblonga apice rotundata utrinque dense villosa, filamentis elongatis antheris ellipticis quam filamenta pluries brevioribus, ovario conico parce piloso apice in stylum circiter eo æquilongum glabrum attenuato, stigmatibus linearibus recurvis.—Ramuli juniores dense villosi dein subglabrati, in sicco nigrescentes læves, amentiferi circiter 2^{mm} crassi, collenchymate in cortice continuo zona fibrosa continua intus aucto, fasciculis intramedularibus uniseriatis. Limbi in sicco membranacei nigrescentes pellucido-punctulati ad 20^{cm} longi ad 9^{cm} lati, juniores læves dein supra subbullati. Petiolus ad limbi latus longius circiter 2^{cm} longus. Amentum per anthesin circiter 6^{mm} crassum. Stamina 4 filamentis longis exsertis. Stigmata 3.—Species *P. Irazuani* C. DC. proxima, ab eo nervorum numero bractea apice obtusa ac longius densiusque pubescente et antheris oblongis discrepans.—San Miguel Uspantán, Depart. Quiché, alt. $6{,}000^{ft}$, April 1892, Heyde & Lux, no. 3,462.

Piper Uspantanense C. DC.—Foliis breviter petiolatis elliptico-lanceolatis basi parum inæquali utrinque acutis apice longe acute acuminatis supra glabris subtus ad nervos nervulosque adpresse hirtellis nervo centrali circiter mediumusque nervos utrinque 4 alternos adscendentes nervulosque validos mittente, petiolo basi ima vaginante dorso hirtello, pedunculo quam petiolus circiter $\frac{1}{3}$ longiore puberulo, amento ipso limbi dimidium vix æquante apice mucronulato, bracteæ pelta triangulari margine dense et longiuscule hirsuta pedicello extus piloso, antheris subglobosis quam filamenta brevioribus, ovario glabro, bacca glabra.—Suffrutex $1–1.5^{m}$ altus, ramulis junioribus hirtellis dein glabris punctulis albis conspersis, 2.5^{mm} crassis in sicco teretibus, collenchymate in cortice subcontinuo zonaque fibrosa discontinua intus aucto, fasciculis intramedullaribus uniseriatis. Limbi in sicco membranacei obscure virescentes subopaci creberrime pellucido-punctati ad 20^{cm} longi. Amenta nondum matura 2^{mm} crassa. Stamina 4 connectivo supra loculos brevissime producto. Bacca tetragona stylo destituta vertice in sicco rufescens. Stigmata 3.—San Miguel Uspantán, alt. $8{,}000^{ft}$, April 1892, Heyde & Lux, no. 3,460; Cerro Gordo, Depart. S. Rosa, alt. $3{,}500^{ft}$, Sept. 1892, Heyde & Lux, no. 3,827.

Piper Yzabalanum C. DC. in Donnell Smith Enum. Pl. Guat. pars II.—Foliis longiuscule petiolatis ample ovatis basi inæquali cordulatis apice breviter acute acuminatis utrinque glabris, nervo centrali paulo ultra medium nervos utrinque 7 patule adscendentes mittente, petiolo glabro limbum usque vaginante, pedunculo quam petiolus adultus 4-plo breviore glabro, amento quam folium pluries breviore apice breviter mucronato, bracteæ spathulatæ vertice inflexo triangulari glabro pedicello lato basi inter baccas producto et hirtello, bacca glabra vertice pulposa.—Ramuli glabri punctulis albis notati in sicco complanati 4–5^{mm} crassi, fasciculis collenchymatosis in cortice distinctis intus fibris aliquot auctis, fasciculis intramedullaribus uniseriatis. Limbi 18^{cm} longi circiter 12^{cm} lati in sicco membranacei pellucido-punctulati. Petioli circiter 4^{cm} longi. Amenta matura ad 6.5^{cm} longa 5^{mm} crassa. Baccæ subtetragonæ stylo destitutæ vertex pulposus in sicco ambitu subproductus. Stamina 4. Stigmata 3.—Boca del Polochic, Depart. Yzabal, alt. 200^{ft}, April 1889, J. D. S., no. 1,712.

Piper Heydei C. DC. (§V. POTOMORPHE C. DC.)—Foliis longe petiolatis adultis $\frac{1}{3}$ supra limbi basin peltatis ovato-rotundatis amplis basi rotundatis repando-subcordatis apice breviter acute acuminatis supra glabris subtus præsertim ad nervos nervulosque fulvescenti-hirsutis 14-plinerviis nervo centrali nervos adscendentes utrinque 3 supra limbi basin et ad $\frac{1}{4}$ longitudinis mittente cæteris nervis e petiolo divaricantibus, petiolo medium usque vaginante dorso apicem versus parce hirsuto, amentis apice ramuli sat longi glabri circiter 12-umbellatis longiuscule pedunculatis ipsis florentibus quam foliorum limbi pluries brevioribus, bracteæ pelta triangulari margine fulvescente hirsuta, antheris subglobosis, ovario glabro.—2^{m} altum. Folia juvenilia haud peltata basi cordata. Limbi in sicco firmule membranacei subopaci pellucido-punctati 33^{cm} longi medioque lati. Petioli adulti circiter 16^{cm} longi. Ramuli amentiferi glabri verisimiliter axillares 16^{cm} longi. Amentorum pedunculi 5^{cm} longi. Amenta ipsa adhuc juvenilia inæquilonga ad 9^{cm} longa. Stamina 3 quorum 2 lateralia tertium posticum. Antheræ filamentis circiter æquilongæ. Ovarium ovatum apice attenuatum adhuc juvenile.—Species limbis subtus hirsutis, ramulis amentiferis multo longioribus et præsertim floribus 3-staminalibus a *P. peltato* L. valde discrepans.—San Miguel Uspantán, alt. 7,000^{ft}, April 1892, Heyde & Lux, no. 3,461.

PIPER TUBERCULATUM Jacq. ic. rar., var. δ. **obtusifolium** C. DC.—Foliis apice rotundatis cæterum ut in specie.—Frutex 3^{m} altus.—Rio Ocosito, Depart. Quezaltenango, alt. 250^{ft}, April 1892, J. D. S., no. 2,592; S. Rosa, alt. 3,000^{ft}, June 1892, Heyde & Lux, no. 3,464. Collected also near Grenada, Nicaragua, by Lévy, no. 93.

Peperomia macrophylla C. DC. — Foliis petiolatis anguste lanceolato-oblongis basi in petiolum decurrentibus apice acute acuminatis utrinque glabris pellucido-punctulatis penninerviis, nervo centrali fere a tota longitudine nervos adscendentes utrinque circiter 10 mittente, amentis ad ramos axillares aphyllos quam folia parum breviores laxe circiter 5 paniculatim dispositis ipsis breviter pedunculatis folii dimidium vix æquantibus, bractea suborbiculari centro brevissime pedicellata, ovario apice oblique scutatim complanato scutello elliptico apice obtuso in medio stigma carnulosum gerente, bacca anguste cylindrica patenti glabra apice scutello persistente erecto subacute terminata.—Herba glabra caule basi decumbente e nodis radicante superne suberecta. Folia alterna. Limbi ad 20^{cm} longi et ad 3.5^{cm} lati in sicco membranacei subpellucidi basi in petiolum ad 3^{cm} longum angustati. Amenta matura in sicco 2^{mm} crassa, basi squamis lanceolatis deciduis fulta, inferiora 2 alterna superiora 2 opposita ultimum terminale. Pedunculi circiter 5^{mm} longi. Antheræ minutæ. Baccæ brevissime stipitatæ cum scutello 1.5^{mm} longæ.—Palin, Depart. Amatitlan, alt. 3,560^{ft}, Feb. 1892, J. D. S., no. 2,578; Barranca de Eminencia, Depart. Amatitlan, alt. 1,400^{ft}, Feb. 1892, J. D. S., no. 2,579.

Peperomia violæfolia C. DC. — Foliis longe petiolatis e basi cordata inferioribus rotundatis superioribus ovatis apice acute acuminatis utrinque glabris 7–9-nerviis, amentis oppositifoliis sublaxifloris breviter pedunculatis glabris foliorum limbos parum superantibus, bractea orbiculari centro pedicellata, ovario emerso stipitato obovato-elliptico apice imo stigma minutum carnulosum gerente, bacca elliptica breviter stipitata. —Herba glabra e stolone caules multos circiter 10^{cm} altos in sicco membranaceos ad 3^{mm} crassos dense agens. Folia alterna. Limbi in sicco tenuiter membranacei pellucidi haud crebre pellucido-punctati 6–7^{cm} longi 5–6.5^{cm} lati. Petioli ad 7^{cm} longi. Pedunculi circiter 1^{cm} longi. Amentia florentia in sicco membranacea pellucida 1.5^{mm} crassa. Ovarium stipite suo parum breviore. Bacca stipitem suum pluries superans circiter ad 1^{mm} longa. Palin, alt. 3,500^{ft}, Feb. 1892, J. D. S., no. 2,580.

Peperomia Sisiana C. DC.—Foliis modice petiolatis oblongo-lanceolatis basi acutis apice longiuscule anguste et subfalcatim acuminatis utrinque glabris junioribus margine ciliolatis 7-plinerviis nervis lateralibus utrinque 2 e basi uno ex $\frac{1}{4}$ longitudinis supra basin solutis, petiolo juniore parce hirtello, amentis adultis folia duplo superantibus filiformibus glabris densifloris, bractea orbiculari centro subsessile, ovario emerso apice scutatim aucto, scutello in medio stigmatifero apice acuminato, stigmate minuto, bacca emersa patente cylindrica apice oblique rostellata.—Herba e basi radicante ramulos circiter 25^{cm} longos erectos apice parce hirtellos inferne glabros agens. Folia alterna. Limbi in sicco membranacei subpellucidi ad 9^{cm} longi et 3–3.5^{cm} lati. Petioli ad 1^{cm} longi. Amenta matura vix 2^{mm} crassa. Baccæ 1.5^{mm} longæ.—Species *P. Naranjoanæ* C. DC. proxima, forsan eadem cum amentis maturis longioribus, limbis basi acutis a *P. elongata* Kunth differt sed ejus quoque proxima.—Rio Sis, Depart. Suchitepequez, alt. 1,300^{ft}, April 1892, J. D. S., no. 2,584.

Peperomia San-Felipensis C. DC. —Foliis breviter petiolatis anguste lanceolatis basi et apice acutis utrinque glabris et nigro-pynctulatis 5-nerviis, amentis terminalibus axillaribusque breviter pedunculatis glabris nigro-punctulatis subdensifloris ipsis folia circiter duplo superantibus, bractea orbiculari centro subsessili, ovario emerso sub apice oblique stigmatifero, bacca subglobosa glabra.—Herba repens glabra caulibus in sicco 1.5^{mm} crassis. Folia alterna. Limbi in sicco firmulo-membranacei subpellucidi 3–4^{cm} longi 8–10^{mm} lati nervis subtilibus. Petioli 6^{mm} longi. Pedunculi vix 5^{mm} longi. Amenta 1^{mm} crassa. Species *P. glabellæ* Sw. proxima limbis angustioribus nervorum numero ramulisque glabris ab ea discrepans. —San Felipe, Depart. Retalhuleu, alt. 2,050^{ft}, April 1892, J. D. S., no. 2,583.

Peperomia Heydei C. DC. —Foliis longissime petiolatis ovato-rotundatis basi cordatis apice rotundatis 9–11-nerviis utrinque glabris, amentis terminalibus axillaribusque glabris longe pedunculatis foliorum limbos circiter æquantibus, floribus annulatim dispositis, bractea orbiculari, ovario obovato apice oblique complanato oblique stigmatifero.—Herba glabra caule decumbente basi radicante in sicco tenuiter membranacea pellucida. Folia alterna. Limbi adulti ad 13^{cm} longi cum petiolis ad 20^{cm} longis in sicco tenuiter membranacei pellucidi. Pedunculi circiter 4^{cm} longi. Amenta in sicco membranacea

2^{mm} crassa. Bractea ovariumque glandulis pallidis conspersa.—Species *P. Gardnerianæ* Miq. affinis.—Laguna de Ayarza, Depart. Jalapa, alt. 8,000^{ft}, Sept. 1892, Heyde & Lux, no. 3,834.

Var. *β.* **minor** C. DC.—Foliis minoribus, limbis ad 9^{cm} longis in sicco paulo firmioribus, petiolis ad 6^{cm} longis, amentis foliorum limbos superantibus.—Estanzuela, Depart. S. Rosa, alt. 2,500^{ft}, Aug. 1892, Heyde & Lux, no. 3,835.

Peperomia Guatemalensis C. DC.—Foliis breviter petiolatis subrhombeo-lanceolatis basi cuneatis apice obtusiusculis supra glabris subtus pilosulis 5-nerviis nervis externis subtilibus, amentis terminalibus vel axillaribus pedunculatis glabris folia pluries superantibus densifloris, bractea elliptica paulo supra medium peltata subsessili, ovario rhachi impresso obovato apice oblique stigmatifero, bacca globosa glabra.—Herba erecta circiter 12^{cm} alta inter muscos crescens, caulibus pilosulis inferne radicantibus. Folia inferiora opposita superiora alterna. Limbi in sicco membranacei subopaci pellucido-punctulati 3–5^{cm} longi 1.5–2^{cm} lati. Petioli ad 4^{mm} longi. Pedunculi ad 8^{mm} longi. Amenta glabra ipsa matura circiter 10^{cm} longa in sicco 1.5^{mm} crassa.—Species *P. Bauerianæ* Miq. proxima.—Acatepeque, alt. 4,300^{ft}, March 1892, J. D. S., no. 2,587.

Peperomia Santa-rosana C. DC.—Foliis quaternis brevissime petiolatis e basi cuneata obovatis apice emarginatis utrinque glabris 5-nerviis, amentis terminalibus pedunculatis ipsis adultis folia pluries superantibus glabris, bractea orbiculari subsessili, ovario emerso in apice obtuso oblique stigmatifero, stigmate minuto.—Herba erecta glabra. Caules in sicco complanati, amentiferi circiter 2^{mm} crassi, steriles ad 6^{mm} crassi. Limbi caulium fertilium 2^{cm} longi 13^{mm} lati, sterilium ad 3^{cm} longi et ad 15^{mm} lati. Petioli 2–3^{mm} longi. Pedunculi ad 2^{cm} longi. Amenta florentia ad 13^{cm} longa et ad 2^{mm} lata.—*P. obcordatæ* Presl verisimiliter proxima sed foliis majoribus et minus profunde emarginatis ab ea discrepans.—S. Rosa, alt. 3,000^{ft}, June 1892, Heyde & Lux, no. 3,454.

Pilea Pansamalana. — Suffrutescent (1.5–2^{ft}); branches several from base, decumbent, simple, terete: stipules minutely triangular; leaves glabrous, punctate and lineolate above, venose beneath, subopposite nerves remote from base and vanishing below apex, crenate-serrate except at base, dimor-

phous and very unequal in the pair; the larger lanceolate to rhomboid-elliptical (18–36×6–10^{l}), tapering each way from middle, apex obtuse, base acutely narrowed into short (2–3^{l}) petiole; the smaller obovate or rhomboid-orbicular, apex rounded, base acute, petiolate: diœcious; pistillate cymes (the only seen) not exceeding petiole of larger leaves, pedunculate, divaricate, flowers pedicellate, interior segment of perianth subequalling the others and minutely cucullate, twice exceeded by staminodes, half as long as obliquely oval (0.75^{l}) and pubescent achenium.—Nearest to *P. dendrophila* Miq.—On decayed mossy trunks of trees, Pansamalá forest, Depart. Alta Verapaz, alt. 3,800^{ft}, June 1886, von Türckheim, no. 939.

Pilea riparia. — Stem repent, elongate, ligneous, simple branches ascending (6–12^{in}): stipules minute, deltoid; leaves glabrous, thick, subentire, 3-nerved from base to middle on upper surface and nearly to apex on reticulated lower surface; the larger in the pair oblong-elliptical (3.5–4×1.75^{in}), long-acuminate, tapering gradually to short (2–4^{l}) petiole; the other a fourth smaller, obovate-elliptical, abruptly acuminate; cystoliths of upper surface densely stellulate-punctiform, of lower minutely linear, of margins large and fusiform: diœcious; staminate cymes not seen; the pistillate pedunculate, little exceeding petiole, divaricate, interior segment of perianth lightly gibbous on back and scarcely exceeding the others, staminodes as long, oval achenium thrice longer (0.5^{l}) and smooth.—Nearest to *P. marginata* Wedd.—Specimens of this, as well as also of the other proposed new species except *P. irrorata*, have been compared by Dr. Taubert in the Berlin Herbarium. I am likewise indebted to him for the identification of several other *Pileæ*, difficult of determination without the aid of authenticated material.—On rocks in a stream, Pansamalá, alt. 3,800^{ft}, August 1886, von Türckheim, no. 1,040.

Pilea irrorata. — Herbaceous; stem shortly rooting at base, stout, simple or forked (1–2^{ft}): stipules elongate-triangular (2–3^{l}), persistent; petioles long (1.5–3.5^{in}), canaliculate, dilated at base and apex; leaves membranaceous, smooth, ample (6–9×2–4^{in}), elliptical, caudate-acuminate, obtuse, base acuminate, the opposite uniform and nearly equal, sinuate-serrulate above middle, 3-nerved from insertion to apex, transverse veins distinct and subparallel, above punctulate and toward base lineolate, cystoliths scarcely present beneath:

monœcious or diœcious; cymes unisexual, subsessile, bracteose, densely flowered; the staminate semi-globose (5–8[l] high), axes explanate, fascicled pedicels filiform (3[l]), perianth before anthesis obpyramidate (0.75[l]) with inflexed cucullate tips, rudimentary ovary nearly obsolete; pistillate cymes smaller and glomeruliform, staminodes most minute, exterior segments of perianth small.—Distinguished chiefly by the long pedicels of staminate flowers.—Pendent from irrigated cliffs of the Barranca of Rio Samalá, Depart. Retalhuleu, alt. 1,700[ft], April 1892, J. D. S., no. 2,751.

Pilea pleuroneura. — Rooting at woody base, ascending (12–18[in]), branching composite, branchlets complanate and alate, glabrous, glandulose: stipules minutely semi-obicular; leaves distichous, subsessile, lanceolate (7–9 × 1.5–2[l]), the smaller in the pair half as long and elliptical, apex obtuse, 2–5-crenate, the inferior half entire and cuneate, penninerved, the stronger 7–9 nerves ascending to margin, veins immersed, cystoliths present only on upper surface and linear: diœcious; staminate flowers not seen; the pistillate fasciculate at apex of longer (1–1.5[l]) peduncle, short pedicels recurved, cucullate segment of perianth twice exceeding the others, achenium obliquely ovate (0.5[l]) and rubro-punctate.—Pansamalá, alt. 3,800[ft], June 1885, von Türckheim, no. 754.

Pilea senarifolia. — Herbaceous, glabrous; stem repent, branches ascending (12–18[in]), opposite or verticillate branchlets 6-alate: stipules scarious, minutely oblong, persistent; petioles short (0.5–1[l]), induplicate; leaves 6-verticillate, unequal, obovate-spatulate to obovate-cuneate (3–5 × 1.5–2[l]), coarsely incurved-crenate above middle, penninerved, crenations and nerves three to a side, upper surface transversely striolate with fusiform cystoliths: monœcious; unisexual cymes from adjacent axils in the whorl; the staminate twice to thrice exceeding petiole, 2–3-flowered, peduncle and pedicels subequal, perianth in præfloration globose (1[l]), tips of segments pileate, rudimentary ovary none; pistillate cymes minute, few-flowered, segments of perianth somewhat unequal.—Anomalous by leaves all strictly verticillate.—On old trunks of trees, Chiul, Depart. Quiché, alt. 8,000[ft], April 1892, Heyde & Lux, no. 3,145.

Pilea Quichensis. — Herbaceous; stem simple (20–30[in]), slightly pubescent, sulcate: stipules deltoid (1.5[l]), decidu-

ous; petioles slender (1–2[in]), triquetrous by produced nerves of leaf, estriolate; leaves glabrate, the opposite somewhat unequal, obliquely oblong-elliptical (4–6.5 × 1–2[in]), prolonged to a slender (6–9[l]) and sharply serrate tip, base acute and induplicate, serrate throughout, 3-nerved to apex, exterior veins all equal and ascending to margin of incurved crenations, interior veins anastomosing, veinlets finely reticulating, pellucid, upper surface striate with small cystoliths, the lower glaucous: monœcious; staminate cymes geminate, shorter than petiole (5–8[l]), peduncle bifurcate, flowers single and racemose or few-clustered on long spreading branches; perianth in aestivation oval (1[l]) and exceeding pedicel, obtuse segments incrassate at the base and back, stamens twice longer, rudimentary ovary minutely subulate; pistillate cymes from uppermost axils much smaller, in anthesis conglomerate, broadly cucullate segment of perianth thickened and exceeding the scarious exterior ones, ovary slenderly elliptical.—Intermediate between *P. multiflora* Wedd. and *P. falcata* Liebm.—San Miguel Uspantán, alt. 6,500[ft], April 1892, Heyde & Lux, no. 3,147.

PINUS DONNELL-SMITHII Mast., Botan. Gaz. **16:** 199.

EXPLANATION OF PLATE II.—Fig. 1, portion of branch with leaf-scars, tufts of leaves, primordial leaves and male flowers, nat. size.—Fig. 2, tuft of leaves with sheath of leaf-scales at the base.—Fig. 3, portion of leaf magn. 4 times, showing lines of stomata and serrations at the edge.—Fig. 3[a], section of leaf magn. 50 diam., showing epiderm, two layers of hypo- or exoderm, stomata, mesophyll with sinuous cells, a triangular pericycle with well marked endoderm and a branched fibro-vascular bundle with phloem towards the dorsal side of the leaf and xylem towards the upper edge. Between the two masses of xylem are several large libriform cells.—Fig. 4, primordial leaf or "*squama fulcrans*" magn. 4 diam.—Fig. 5, male flower isolated magn. 2 diam.—Fig. 6, stamen from the front and from the back magn. 6 diam.—Fig. 7, stamen from the side magn. 6 diam.—Fig. 8, pollen grain magn. 200 diam.—Fig. 9, ripe cone.—Fig. 10, longitudinal median section of cone.—Fig. 11, detached scale of cone showing apophysis and umbo.—Fig. 12, scale of cone seen from the side.—Fig. 13, young seed.

Dioscorea dicranandra. (§ ALLACTOSTEMON Griseb. in Fl. Bras.)—Glabrous in all parts: leaves orbicular-cordate (5–9 × 4–7[in]), abruptly acuminate, membranaceous, pale beneath, pellucid-lineolate, nerves 7–9, the exterior pair 1-furcate, midrib somewhat exceeding stout petiole and thrice longer than approximate basal lobes, sinus broad, transverse veins distinct: spikes solitary; or the fertile 3–5-fasciculate and occasionally furcate, filiform (12–17[in]), rachis angulate, bracts broadly oval and long-acuminate, flowers solitary and sessile;

sterile flowers somewhat exceeding bract, perianth ¾-partite, semi-erect segments oblong-lanceolate (1.5[l]), distinct stamens a third as long and exceeded by subulate staminodes, anthers bipartite-locular and shorter than filament, rudimentary ovary none; fertile flowers less approximate, segments of perianth linear (1.5[l]) and equalling tube and bract, connate styles very short (0.5[l]) and twice exceeding effete stamens, deflected stigmas bilabiate: capsules not seen.—The character is drawn from specimens collected at two localities and respectively of different sexes, but matching in form and anatomy of foliage; in each the flowers are of novel structure.—Cerro Gordo, Depart. S. Rosa, alt. 3,500[ft], Sept. 1892, Heyde & Lux, no. 3,869; Rinconcito, Depart. S. Rosa, alt. 4,000[ft], Nov. 1892, Heyde & Lux, no. 4,359.

Baltimore, Md.

[From the Botanical Gazette, Vol. XIX.]

Undescribed plants from Guatemala and other Central American Republics.[1] XIII.

JOHN DONNELL SMITH.

WITH PLATES XXIV—XXVI.

Heisteria Costaricensis Donnell Smith. (§ Leiocarpæ Engl.)—Folia disticha anguste lineari-lanceolata juxta basim acute angustata supra medium sensim in apicem mucruncula-tum attenuata, margine adpresse retroflexo, petiolo brevi de-currente. Calyx urceolatus post anthesim retroflexus pedicelli dimidium æquans, dentibus brevibus triangularibus in setam desinentibus. Petala libera obovata ad apicem emarginata calyce sublongiora. Ovarium perianthium paullo superans latior quam longior collo coronatum. Calyx fructiferens coriaceus patulus pentagono-orbicularis cum pedicello breviore sanguineus subtus maculis albis notatus. Drupa ovata-globosa calycis radio brevior atro-cyanea.

A large bush with slender, drooping, and closely leafy branches that are toward their tips flexuose and angulate. Leaves 6–8^{in} × 9–11^{l}, membranaceous, pellucid-punctulate, glaucescent beneath. Petiole 3–4^{l} long, decurrent in narrow wings. Flowers scarcely a line high, apparently solitary. Stamens not seen. In fruit, pedicel $3\frac{1}{2}$–$4\frac{1}{2}$^{l} long, calyx 10–12^{l} in diam. Drupe 5 × 4^{l}.—The only other species described, with similarly narrow leaves, *H. salicifolia* Engl. from South Brazil, is distinct by its calyx, which in fruit is cupuliform, deeply lobed, plicate and enclosing the pale drupe.—Forest on Rio Reventazón, Prov. Cartago, Costa Rica, alt. 2,000^{ft}, Mch. 1894, J. D. S., (ex Plantis Guatemalensibus necnon Salvador-ensibus Hondurensibus Nicaraguensibus Costaricensibus, quas edidit John Donnell Smith, 4,760).

---

[1] The title of these papers, as well as that of the tickets accompanying the distribution of plants, has been changed to the form here employed, in order to include in the series some collections from other parts of Central America.

Cuphea Heydei Koehne (inserenda post *C. Liebmannii* Koehne in Engler's Bot. Jahrbüch. **2:** 409. 1882. Sect. x. MELVILLA Koehne, subsect. 5. Erythrocalyx Koehne). ICON: Koehne Atlas Lythracearum ined. *t. 44. fig. 380.*—Fruticulus *ramis junioribus dense hispidis* vetustioribus glabratis. Folia internodiis 2–3-plo longiora, basi acuta vel in petiolum 1–4^{mm} longum hispidum attenuata, elliptica v. lanceolata (24–54^{mm}: 11–17^{mm}), longe acuminata, parce ciliata, superiore pagina parce, inferiore in nervis densius hispida, vix rigidula, subtus pallidiora. *Flores solitarii; pedicelli axillares* 9–20^{mm} æquantes, parce hispidi, prophylla minutissima, quasi in setas 3–4 dissoluta summo apice gerentes. Calyx (22–26^{mm}) calcare orbiculari dilatato subincurvo (fere 3^{mm} longo latoque) instructus, subrectus, subgracilis, infra faucem ascendentem valde dilatatam plicatam subangustatus, verisimiliter intense coccineus, infra medium hispidus, intus glaberrimus; *lobi brevissimi, setis 4–6 ciliati; appendices lobis longiores, dorso seta valida munitæ. Petala* 0 *v. duo dorsalia minutissima subulata.* Stamina ad tubi $\frac{4}{5}$ lineæ rectæ inserta; episepala fere $\frac{1}{3}$ supra tubum exserta; epipetalorum 4 ventralia lobos aequantia, 2 dorsalia paullo breviora et ceteris vix inferius inserta; omnia glaberrima. Stylus glaberrimus, sub anthesi ovarium glaberrimum duplum aequans, demum circ. 8^{mm} exsertus. Discus crassus, ovato-cordatus, deflexus, supra sulcatus, subtus convexus. Ovula 9–14.—A *Cuphea Liebmannii* Koehne proxima differt calycibus majoribus appendicibus manifestis seta munitis et praecipue pedicellis axillaribus nec interpetiolaribus.

Nebáj, Depart. Quiché, Guatemala, alt. 7,000^{ft}, May 1891, Heyde & Lux, no. 4,480.

IPOMÆA FISTULOSA Mart., var. **Nicaraguensis** Donnell Smith.—Volubilis, foliis cordiformibus acuminatis discoloribus supra pubescentibus subtus cano-velutinis. Sepala pubescentia orbicularia. Corolla ad 3–4-pollicaris. Semina flavocomosa.

Rio de Las Layas, Depart. Rivas, Nicaragua, alt. 120^{ft}, April 1893, Dr. W. C. Shannon, U. S. Army, no. 5,046.

Salvia Shannoni Donnell Smith. (§ CALOSPHACE.)—Suffrutex cano-pubescens. Folia ovato-lanceolata sensim acuminata ad basim acuta obtusave serrulata discoloria supra scabriuscula subtus cum petiolis velutina, floralia subconformia contractius acuminata flores superantia. Racemorum

breviter pedunculatorum verticillastra coarctata 6–14-flora, infirma subremota. Calycis subsessilis tubuloso-campanulati labia late ovata, posticum integrum anticum acute dentatum. Corolla quam calyx duplo fere longior ad medium subæqualiter labiata, tubo gracili vix ventricoso sub exserto, labii inferioris lobo medio reniformi bifido. Stylus superne unilateraliter fimbriatus.

Leaves 3–4 × $1\frac{1}{4}$–$1\frac{3}{4}$[in], petioles 6–8[l] long. Racemes 3–5[in] long; bracts sessile, herbaceous, pubescent, purplish, persistent, 8–10 × 4–5[l]. Calyx pubescent, virescent or colored, 5[l] long, lips $1\frac{1}{2}$[l] long. Corolla blue, 8[l] long, nearly glabrous galea 3[l] long; lip pubescent on back, 4[l] long, middle lobe $1\frac{1}{2}$ × 3[l]. Filament produced at articulation; anterior branch of connective $1\frac{1}{2}$[l] long, not dilated, glabrous, dentate. Inferior lobe of style $\frac{1}{2}$[l] long, the superior thrice longer.—Slopes of Volcan Chingo, Depart. Jutiapa, Guatemala, alt. 3,000[ft], Oct. 1892, Dr. W. C. Shannon, U. S. Army, no. 3,612.

Triplaris Macombii Donnell Smith.—Folia pedalia oblique lateque elliptico-ovata abrupte acuminata ad basim late rotundata glabrata subtus rubro-punctulata, margine pilosiusculo, costa subtus adpresse pilosa. Racemi feminei (qui soli suppetunt) singuli aut bini aut terni ex summis axillis orti itidem in paniculam terminalem folia superantem congesti. Calycis fructiferentis lobi exteriores quam tubus oblongus altero tanto longiores linguiformes, sinuum late rotundatorum marginibus retroflexis, lobi interiores tubum subæquantes eique $\frac{2}{3}$-adnati setaceo-subulati ad basim plus minus appendiculati. Nuculæ nitidæ quam tubus $\frac{1}{3}$ brevioris facies ovatæ, stylis fauces haud attingentibus.

Branchlets smooth, sulcate, verrucose at nodes. Leaves membranaceous, undulate, inequilateral, 10–13 × 6–7[in]; caudate acumination blunt, 5[l] long; nervation immersed above, salient beneath, 17–19 lateral nerves straight and uniting in arches remote from margin, reticulation minute, longitudinal impressions nearly obsolete; petiole 8–11[l] long. Panicle densely flavo-sericeous, rachis flexuose; racemes densely flowered from near base, 8–12[in] long; bracts persistent, acuminate-ovate, margins continuing united below, within pluri-nerved and colored; pedicels as long (4[l]), deflexed. Calyx of matured fruit 26[l] long, pale-yellow; tube appressed-villose, 9 × 3[l]; wings sparsely pilose, 17 × 5[l], obtuse, narrowed toward base; interior lobes somewhat unequal, about 3[l] long.

Nutlet 5 × $3\frac{1}{2}^{l}$, styles 2^{l} long.—Most nearly related to *T. auriculata* Meisn. and *T. Arnottiana* Meisn., the originals of which in the Meisner herbarium of Columbia College have been compared.—Jiquilisco, Depart. Usulután, Salvador, alt. 220^{ft}, Jan. 1893, Dr. W. C. Shannon, U. S. A., no. 5,064. Named for Lieut. M. M. Macomb, U. S. Army, Engineer in Charge, Corps no. 1, Intercontinental Railway Commission.

Piper flavidum C. DC. in Donnell Smith Enum. Pl. Guat. **2:** 66; (§ III. STEFFENSIA C. DC.); foliis brevissime petiolati s lineari-lanceolatis basi æquali acutis apice acute acuminatis mucronulatisque utrinque glabris, nervo centrali circiter ad $\frac{1}{4}$ longitudinis nervos utrinque 3 alternos adscendentes mittente, petiolo glabro basi ima vaginante, pedunculo glabro petiolum superante, amento florente folii dimidium æquante, bracteæ vertice triangulari margine flavide hirsuto, bacca subtetragona apice subtiliter flavide hirtella.—Ramuli glabri internodiis brevibus, corticis collenchymate continuo zona fibrosa continua intus aucto, fasciculis intramedullaribus 2-seriatis. Limbi 8^{cm} longi 13^{mm} lati in sicco firmuli flavicantesque. Petioli ad 2^{mm} longi. Pedunculi 6^{mm} longi. Amentia florentia 3^{mm} crassa. Stamina 4.

Barranca de Rubelcruz, Depart. Alta Verapaz, Guatemala, alt. 2,500^{ft}, Apr. 1889, J. D. S., no. 1,744.

Piper Tuerckheimii C. DC. in Donnell Smith Enum. Pl. Guat. **2**: 96; (§ III. STEFFENSIA C. DC.); foliis modice petiolatis, limbis 3^{cm} supra basin peltatis oblongo-ovatis basi rotundatis leviterque repandis apice acute acuminatis supra glabris subtus præsertim ad nervos hirtellis, nervo centrali circiter ad $\frac{1}{2}$ longitudinis nervos utrinque 3 oppositos adscendentes mittente, lateralibus 4–5 e basi solutis tenuibus, amento quam folium pluries breviore apice longe mucronato, pedunculo quam petiolus pluries breviore, bracteæ apice truncato-peltatæ pelta triangulari margine hirtella, bacca subglobosa vertice hirsuta.—Ramuli dense hirtelli. Limbi ad 24^{cm} longi ad 12^{cm} lati. Petioli 4.5^{cm} longi hirtelli basi vaginantes. Pedunculi 8 longi hirtelli. Amenti pars baccifera 5^{cm} longa mucro 2^{cm} longus hirtellus. Stamina 4.

Pansamalá forest, Depart. Alta Verapaz, Guatemala, alt. 3,800^{ft}, Aug. 1886, von Türckheim, no. 1,038.

Piper Santa-rosanum C. DC. in Donnell Smith Enum. Pl. Guat. **2**: 96; (§ STEFFENSIA C. DC.); foliis modice petiolatis

oblique rotundato-ovatis basi inæquali rotundatis subcordatisque apice obtusiuscule acuminatis utrinque dense velutinis 7-nerviis nervis 5 medianis validioribus, petiolo dense velutino basi ima vaginante, amento baccifero limbum æquante, pedunculo petiolum parum superante velutino, bractea spathulata apice rotundata utrinque et præsertim dorso hirsuta, ovario hirtello, bacca globoso-ovata hirtella.—Frutex 3–4^{m} altus. Ramuli dense velutini, cortex fasciculis collenchymateis discretis instructus fibris destitutus, fasciculi intramedullares uniseriati. Folia in sicco subrubescentia. Limbi in sicco firmi circiter 12^{cm} longi 7.5^{cm} lati. Petioli 1^{cm} longi. Amenta baccifera 3^{mm} crassa. Stamina 4, antheræ reniformi-globosæ caducæ filamentis circiter æquilongæ.

River-bank near Santa Rosa, Depart. Baja Verapaz, Guatemala, alt. 5,000^{ft}, Apr. 1887, von Türckheim, no. 1,174, distributed as *P. patulum* Bertol.; Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 4,000^{ft}, May 1892 and Nov. 1892, Heyde & Lux, nos. 3,463 and 3,833; Capetillo, Depart. Zacatepequez, Guatemala, alt. 4,300^{ft}, Mch. 1892, J. D. S., no. 3,590.

Piper variabile C. DC. in Donnell Smith Enum. Pl. Guat. **2:** 66; (§ IV. CARPUNYA C. DC.); foliis modice petiolatis late ovatis basi truncato-rotundatis vel elliptico-ovatis basi subacutis omnibus apice acuminatis utrinque glabris, nervo centrali nervos ad $\frac{2}{3}$ longitudinis utrinque circiter 5 sursumque nervulos validos mittente, petiolo glabro basi ima vaginante, amento folium subæquante pedunculo quam petiolus paulo breviore, bracteæ vertice glabro triangulari superne breviter acutato unde subquadrangulari pedicelloque basi hirsuto, bacca obpyramidato-trigona glabra.—Ramuli glabri. Limbi in sicco subcoriacei opaci fuscescentes late elliptici 16.5^{cm} longi 12.5^{cm} lati, elliptico-ovati 16^{cm} longi 8.5^{cm} lati. Petioli 1.5^{cm} longi. Amenta baccifera ad 6^{mm} crassa. Stamina 3.—Species foliorum forma in ramis amentiferis ipsis valde variabili insignis.

Mountain-forests near Coban, Depart. Alta Verapaz, Guatemala, alt. 4,300^{ft}, May 1879, von Türckheim, no. 434.

Piper Donnell-Smithii C. DC. in Donnell Smith Enum. Pl. Guat. **2:** 95; (§ IV. CARPUNYA C. DC.); foliis breviter petiolatis lanceolatis basi æquali acutis apice longiuscule acute acuminatis utrinque glabris, nervo centrali circiter ad medium nervos utrinque 5 nervulosque validos mittente, peti-

olo basi ima vaginante, pedunculo petiolum æquante, amento quam folium pluries breviore, bracteæ apice turncato-peltatæ vertice triangulari margine hirtello pedicelloque lato hirtello, bacca parce hirtella.—Ramuli glabri tenues, cortex collenchymate proprio destitutus zona fibrosa continua instructus, fasciculi intramedullares sub-2-seriati. Limbi ad 13^{cm} longi ad 4^{cm} lati, in sicco membranacei nigrescentes opaci. Petioli 7^{mm} longi. Amenta submatura ad 4^{cm} longa 3^{mm} crassa. Stamina 3. Bacca obpyramidato-trigona in sicco nigra.—Species *P. eucalyptifolium* Rudge mire simulans amentis angustioribus ramulis haud uno latere hirtellis et verisimiliter staminum numero ab eo discrepans, a *P. concinno* C. DC. bracteæ pelta hirtella, a *P. Costaricense* C. DC. amentis brevioribus distincta.

Pansamalá, Guatemala, alt. 4,000^{ft}, July, 1886, von Türckheim, no. 975.

Peperomia Cobana C. DC. in Donnell Smith Enum. Pl. Guat. **2:** 66; foliis alternis longiuscule petiolatis lanceolatis utrinque glabris, nervo centrali nervos utrinque 4–5–6 mittente, amentis apice caulis et ramuli axillaris aphylli 3 alternis foliorum limbos circiter æquantibus, ovario basi rhachi impresso apice oblique subulato antice stigmatifero.—Erecta glabra. Limbi ad 13^{cm} longi ad 5^{cm} lati in sicco subcoriacei opaci nervis ægre cernendis. Petioli ad 3^{cm} longi. Ramuli amentiferi pars infera sterilis 9^{cm} longa. Amenti pedunculus ad 2^{cm} longus. Amentum ipsum circiter 1^{mm} crassum. Bractea orbicularis.—Species *P. lancifoliæ* Hook. proxima petiolis multo longioribus ab ea præcipue discrepans.

Near Coban, Guatemala, alt. 4,600^{ft}, June, 1879, von Türckheim, no. 78.

Peperomia Luxii C. DC.; foliis quaternis modice petiolatis e basi cuneato-obovatis apice emarginulatis utrinque glabris indistincte 3-nerviis in sicco coriaceis, amentis terminalibus pedunculatis pedunculos suos circiter duplo foliorumque limbos circiter triplo superantibus densifloris, rhachi glabra, bractea orbiculari coriacea centro pedicellata, ovario semiimmerso ovato in stylum gracilem apice stigmatiferum terminato, bacca ovata stylo ea breviore apice mucronata.—Herba procumbens glabra, caule in sicco coriaceo 4-sulcato vix 2^{mm} crasso. Limbi opaci circiter 15^{mm} longi 8^{mm} lati. Petioli circiter 3^{mm} longi. Pedunculi 2^{cm} longi. Amenta matura ad 5^{cm} longa 1^{mm} crassa.

Ojo de Agua, Depart. Santa Rosa, Guatemala, alt. 3,500^{ft}, Sept., 1892, Heyde & Lux, no. 3,828.

Phoebe amplifolia Mez et Donnell Smith; foliis amplissimis, adultis supra glabris nitidisque vel secus nervos adpresse tomentellis, dense nervis immersis areolatis, subtus tomento brevi puberulo, ad nervos ferrugineo mollibus, latissime ellipticis, apice breviter subacuminatis, penninervibus; inflorescentia dense ferrugineo-tomentella, submultiflora, laxiuscule panniculata, foliis multo breviore; floribus dense ferrugineo-tomentellis; limbi segmentis æqualibus, subobtusis; filamentis pilosis quam antheræ multo brevioribus; antheris omnibus 4-locellatis; ovario glaberrimo.—Arbuscula videtur (ex ramorum habitu), ramulis crassis, dense adpresseque ferrugineo-tomentellis basin versus cinerascentibus, striatim subangulatis; gemmis dense ferrugineo-tomentosis; cortice esipido, paullo mucoso. Folia petiolis usque ad 32^{mm} longis, validissimis, supra profunde canaliculatis, tomento peradpresso brevissimoque adultioribus cinereo obtectis stipitata, sparsa, rigide coriacea, supra (præter nervos adpresse cinereo-tomentellos) adulta saltem glabra nitidaque et dense venulis immersis areolata, subtus tomento brevi puberulo, ad nervos ferrugineo mollia valde prominenti-reticulata, latissime elliptica, basi breviter acuta apice breviter lateque subacuminata, ex specimine nostro usque ad 0.3^{m} longa, 0.16^{m} lata, costis e nervio medio sub angulo 45–60° prodeuntibus, margine quam maxime recurvato, in statu sicco præsertim basin versus solemniter lateque replicato. Inflorescentia laxiuscule panniculata late subthyrsoidea, dense adpresseque tomento ferrugineo obtecta, foliis permulto brevior; pedicellis sæpius 4^{mm} vel paullo infra longis, bracteolis deciduis. Flores dense adpresseque ferrugineo-tomentelli, limbi segmentis quam genitalia multo longioribus, æqualibus, lingulatis, apice subobtusis. Filamenta pilosa quam antheræ multo breviora, ser. III basi glandulis binis magnis, sessilibus aucta. Antheræ subquadraticæ, obtusæ, omnes quatrilocellatæ, locellis ser. II exteriorum introrsum, ser. III sublateraliter dehiscentibus. Staminodia perconspicua filamento manifesto, piloso stipitata. Ovarium glaberrimum, subglobosum; stylo crasso subæquilongo; stigmate pulvinato. Bacca maxima (± 33^{mm} longa, 22^{mm} diam. metiens), bene ellipsoidea, cupulæ crassæ, subpateriformi, obscure duplicimarginatæ, sensim conice in pedicellum valde incrassatum transeunti insidens.

El Jute, Depart. Quiché, Guatemala, alt. 10,000ft, Apr. 1892, Heyde et Lux, no. 3,033.

EXPLANATION OF PLATE XXIV.—Fig. 1, flowering and fruiting branch.—Fig. 2, posterior view of stamen ser. 1.—Fig. 3, anterior view of stamen ser. 3, with glands —Fig. 4, posterior view of stamen ser. 4.—Fig. 5, Pistil. (Fig 1 is natural size; the others are variously enlarged.)

Nectandra Heydeana Mez et Donnell Smith; foliis adultis præter costarum axillas subtus sæpius perconspicue barbellatas glabris, optime ellipticis, basi nunc rotundatis nunc breviter acutis, apice sueto acumine brevi sed eleganti prædita, utrinque valde prominulo-reticulatis; inflorescentia subcorymbosa vel subpyramidata, glaberrima; floribus hermaphroditis, glabris, ± 7mm diam. metientibus; filamentis ser. I, II nullis; ovario glabro, stylo subæquilongo. — Arbuscula 12–24ped alta (ex cll. Heyde et Lux!), ramulis glaberrimis, atris vel cinerascentibus, apicem versus lineatim angulosis, gemmis dense sulfureo-strigulosis nonnunquam minute sericantibus, cortice esipido. Folia petiolis usque ad 20mm longis (sed sæpius conspicue brevioribus quoque), supra leviter canaliculatis, sub lente primum peradpresse sulfureo-strigulosis demum glabratis stipitata, sparsa, tenuiter membranacea vel membranacea, præter costarum axillas subtus sæpius perconspicue barbellatas glaberrima, utrinque valde prominenti-reticulata supra (sicca) olivacea nitida, subtus minute rubenti-viridia subnitida, optime elliptica, basi sueto rotundata rarius breviter acuta, apice sæpius acumine brevi sed eleganti prædita, ± 0.16m longa, 72mm lata, costis e nervio medio sub angulo 50–60° prodeuntibus, margine haud recurvulo, sæpius eleganter undulato. Inflorescentia subpauciflora, subcorymbose vel subpyramidatim panniculata, glaberrima, foliis brevior; pedicellis longis (sæpius 7mm metientibus); bracteolis deciduis. Flores hermaphroditi, glabri, ± 7mm diam. metientes, limbi segmentis patentibus, æqualibus, ellipticis, apice rotundatis. Filamenta ser. I, II desunt; ser. III glabra sed generis ritu papillosa, antheris duplo vel ultra breviora, percrassa, basi glandulis binis minutis, globosis, sessilibus aucta. Antheræ ser. exteriorum suborbiculares, apice bene rotundatæ, papillosæ. Ovarium glabrum, subglobosum, stylo crasso, subæquilongo. Fructus ignotus.

Santa Rosa, Depart. Santa Rosa, Guatemala, alt. 3,000ft, Nov. 1892 and Jan. 1893, Heyde et Lux, nos. 4,260 and 4,578.—PLATE XXV.

Pedilanthus macradenius Donnell Smith. (§EUPEDILANTHUS Boiss.)—Folia glabra ampla obovato-oblonga angulo obtusissimo terminantia, basi obtusa. Cymæ ex axillis supremis ortæ breves oligocephalæ, bracteis oblongo-ovatis pedunculos superantibus. Involucrum ad basim rectangulare, calcaris quam tubus paullo minoris deflexi glandulas 2 majusculas gerentis labiis ovatis sub apice plica intrusa auctis, tubi lobis binis inferioribus ovatis cano-fimbriatulis superiore cum intermediis aequilongis alte connato. Bracteolæ numerosissimæ flores masculos aequantes, pedicellis masculis et femineo filamentisque glabris. Capsula depresso-sphaerica lineis dehiscentiæ 6 latis albis notata.

Arboreous. Leaves olive-green, at apex of branchlets 4–6 × 2–3^{in}; petioles smooth, 3^{l} long. Bracts rubescent beneath hoary pubescence, 6 × 3^{l}. Peduncles pubescent. Involucre rubescent, smooth within, 5–6^{l} long, spur 3½ × 2^{l} with oval glands 1^{l} long, tube 4 × 3^{l}. Capsule 4^{l} in diam., coccules ecarinate, seeds trigonal-globose.—Canival, Depart. Huehuetenango, Guatemala, alt. 3,200^{ft}, Dec. 1891, Dr. W. C. Shannon, U. S. Army, no. 412.

Æchmea Friedrichsthalii Mez et Donnell Smith; foliis super vaginam longe paullo angustatis, spinulis minutis armatis vel interioribus saepius fere omnino inermibus; inflorescentia bipinnatim vel imperfecte tripinnatim panniculata, e ramulis distiche florigeris subpatentibus composita, densiuscula subellipsoidea; bracteolis florigeris reflexo-patentibus, latissime ovatis breviterque (nec pungenter) acuminulatis, ovarii medium haud attingentibus; floribus ad 17^{mm} longis, sessilibus; sepalis liberis vel minutissime tantum connatis, apice in aciculum minutissimum (fructiferis saepius deciduum) dorsalem productis; petalis in spinulam terminalem desinentibus, altiuscule ligulatis; filamentis ser. II cum petalis peralte connatis; placentis interno loculorum angulo apici affixis.—Epiphyta (ex cl. Friedrichsthal !), acaulis, florifera ad 0.5^{m} alta. Folia e vagina ovali, margine nunc integerrima nunc dissite spinulis parvis, patentibus aucta, praesertim dorso adpresse allutaceo-lepidota in laminam ensiformem producta, saepius 0.6^{m} vel paullo ultra longa, submembranacea vel tenuiter chartacea, apice longius breviusve acuta, spinulis haud ultra 1^{mm} longis praedita vel interiora fere subinermia, interiora saltem apicem versus pulchre rubentia, subglabra. Inflorescentia multiflora, apicem usque e ramulis distiche florigeris, subpatentibus, vix

ultra 55^{mm} longis composita, foliis brevior, in scapi gracilis, glabri vel perparce lepidoti, vaginis pulchre rubentibus membranaceis, suberectis, lanceolatis perlongeque acutis, inferioribus margine minutissime spinulosis superioribus integerrimis, paullo lepidotis, internodia superantibus praediti apice elata, ovoidea vel ellipsoidea, ±0.15^{m} longa, 90^{mm} diam. metiens, glaberrima; ramulis conspicue undulatis, 6–10-floris; bracteis primariis infimis anguste lanceolatis, peracutis, ramulos axillares ultra dimidium aequantibus, reflexis; bracteolis florigeris 3.5–5^{mm} longis, reflexo-patentibus, submembranaceis, tenuissime solum saepiusque obscure venoso-lineatis, glabris, latissime ovatis breviterque (nec pungenter) acuminulatis, satis concavis. Flores per anthesin secus ramulos stricte erecti, sessiles, 17^{mm} longi, glabri; sepalis liberis vel basi minutissime solum connatis, 5.5^{mm} longis, apice in aciculum minutissimum, brunneum, dorsalem productis, latere tecto in alam maximam aciculo multo altiorem dilatatis. Petala 13^{mm} longa, ex ungue lineari in laminam angustam, sublanceolatam, peracute in spinulam terminalem transeuntem dilatata, 2^{mm} a basi ligulis binis profunde fimbriato-incisis aucta. Stamina petalis paullo breviora, filamentis anguste linearibus, tenuibus, ser. I liberis, ser. II cum petalis peralte (ultra laminæ basin) intime connatis; antheris luteis, fere 3^{mm} longis, lanceolatis, utrinque sed praesertim apice acutis, prope medium dorsifixis. Ovarium subglobosum, longitudinaliter sulcatum, ad 7^{mm} longum; tubo epigyno subnullo; stylo antheras exacte aequante, gracili; stigmatibus longe divisis, perangustis, laxe spiraliter contortis. Bacca cœrulea !, globosa, *Pisi* magnitudine, sepalis persistentibus tenuiter conice conniventibus coronata; seminibus allutaceis, vix 2^{mm} longis.

Isla de Catina, Rio San Juan, Nicaragua,[1] 1839, Friedrichsthal, no. 609, (herb. Vindob.). Rio Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650^{ft}, Apr. 1894, J. D. S., no. 4,962.

Pitcairnia puberula Mez et Donnell Smith; foliis exterioribus ignotis, interioribus haud petiolatis, anguste lanceolatis, integerrimis, subtus junioribus lepidibus albis pilos magnos simulantibus furfuraceis; inflorescentia simplicissima,

[1] Mr. Hemsley has remarked, that all of Friedrichsthal's plants in the Kew herbarium are ticketed as from Guatemala; and this is the case also with the Vienna specimen above cited. In fact, the collections were made in Nicaragua and Costa Rica.

medium usque laxiuscule, apicem versus dense racemosa, multiflora; foliolis scapalibus internodia longe superantibus; bracteis maximis, triangulo-lanceolatis, infimis flores axillares triplo vel ultra superantibus; floribus pedicellis brevibus crassisque stipitatis; sepalis anguste triangularibus, haud carinatis; petalis eligulatis; seminibus utroque polo tenuiter caudatis.—Imperfecte solum cognita, florifera vix ultra 0.4^{m} alta. Folia rosulæ desunt. Scapus validus, erectus, foliis permanifeste brevior, lepidibus araneosis cinereis vel albidis puberulus, dense foliolis iis rosulæ absque dubio æqualibus, anguste lanceolatis, longe peracutis, viridibus, supra glabris subtus junioribus lepidibus albidis pilos magnos simulantibus dense furfuraceis, adultis ± perfecte glabratis, omnibus erectis internodiaque perlonge superantibus, inflorescentiamque medio fere æquantibus usque ad 18^{mm} latis, omnino inermibus instructus. Inflorescentia simplicissima, medium usque laxiuscule apicem versus dense racemosa, paullo infra 0.2^{m} longa, 40^{mm} diam. metiens, cylindrica apiceque rotundata, multiflora; rhachi recta, haud vel vix angulata, lepidoto-puberula; bracteis inflorescentiæ basin versus persensim in folia scapalia transeuntibus triangulo-lanceolatis longissimeque acutis, erectis, infimis flores axillares triplo vel ultra superantibus, supremis quam sepala subduplo brevioribus. Flores deflorati fructiferi solum cogniti stricte erecti, pedicellis percrassis, lepidoto-puberulis, haud ultra 4^{mm} longis stipitati; sepalis subglabris, ad 21^{mm} longis, e basi 5^{mm} lata in apicem acutam sensim angustatis triangularibus, symmetricis, haud carinatis. Petala (nonne revera, ut ex sicco videtur alba vel lutea?) eligulata. Genitalia ignota. Capsula matura ± 18^{mm} longa, ad $\frac{5}{6}$ longit. supera, tenuiter conice perlongeque acuta, basin usque dehiscens, seminibus 2.5^{mm} longis, fere rectis, utrinque cauda tenui egregiaque appendiculatis.—Obs. Species persingularis, Eupitcairnieis adscribenda sed pedicellis crassis bracteisque infimis saltem perelongatis quam maxime notabilis. Binæ adhuc solum hujus gregis species e Guatemala allatæ mihi cognitæ, quæ petalis eligulatis gaudent, utraque infeliciter imperfecta solum mihi ante oculos. (Mez.)

Cenaguilla, Depart. Santa Rosa, Guatemala, alt. 4,000^{ft}, Sept. 1892, Heyde & Lux, no. 3,879.

Anthericum apodastanthum Donnell Smith. (Subgenus Hesperanthes Baker.)—Folia radicalia linearia graminoidea valde 15–17-nervata, margine vix ciliolato. Scapus sesqui-

pedalis teres glaber ebracteatus. Racemus (in exemplaribus mihi suppetentibus) simplex flexuosus, nodis inferioribus remotissimis. Bracteæ interiores ovatæ cuspidatæ, exteriores lanceolatæ denique subulato-attenuatæ. Pedicelli terni in medio articulati. Perianthii segmenta perspicue 3-nervata, interiora in sicco lutea. Filamenta muriculata nunc ovarium aut antheras aequantia nunc eis duplo longiora. Stylus nunc ovarii nunc perianthii longitudinem aequiparans. Capsula oblongo-ovalis perianthio marcido $\frac{1}{2}$ brevior semina in loculo quoque 9–10 habens.

Rhizome not seen. Leaves 12–15^{in} × 2–3^{l}. Raceme 7–8^{in} long, lower internodes $1\frac{1}{2}$–3^{in} long, exterior bracts at length 1^{in} long, pedicels 4–9^{l} long. Perianth 6–7^{l} long. Anthers $1\frac{1}{2}^{l}$ long.—Indicated by Mr. J. G. Baker as undescribed and nearest to his *A. Skinneri*.—San Bartolo, Depart. Zacatepequez, Guatemala, alt. 5,000 ^{ft}, May, 1890, Heyde & Lux, no. 4,644.

Gymnogramme sciatraphis Donnell Smith.—Stipites e caudice brevi crasso caespitosi graciles spithamæi straminei glabri, basi paleacea. Frondes acuminato-ovatæ pedales glabræ 4–5-pinnatim decompositæ, jugis plurimis confertis, pinnis pinnulisque oppositis e basi truncata subsessili ovatis lanceolatisve, pinnis infimis maximis, pinnulis ser. II rhomboideis 1–2-fidis, ultimis ellipticis deorsum attenuatis plerumque bifurcatis, segmentorum nervio unico infra medium usque ad furcam sorifero.

Scales ovate, 3–4^{l} long, rigid, blackish, imbricating. Stipes and rachises canaliculate. Sterile and fertile fronds similar, 20–26-jugate. Basal pinnæ accuminate-deltoid, spreading, incurved, 6–$7\frac{1}{2}^{in}$ long, 15–20-jugate; its lower pinnules 2^{in} long, 9–12-jugate. Segments oblong, acute, 1–$1\frac{1}{2}^{l}$ long, fruit-dots cylindrical.—To be grouped with *G. chaerophylla* Desv. and *G. schizophylla* Baker, which differ chiefly by absence of caudex and of scales, circumscription and loose pinnation of fronds.—Shaded precipitous banks of Rio Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650^{ft}, Apr. 1894, J. D. S., no. 5,084.

Baltimore, Md.

EXPLANATION OF PLATE XXVI.—Fig. 1, frond.—Fig. 2, pinnule.—Fig. 3, pinnule of second order.—Fig. 4, ultimate pinnule.—Fig. 5, scale from base of stipe. (Figure 1 is somewhat reduced; the others are variously enlarged.)

[From the Botanical Gazette, Vol. XX.]

JOHN DONNELL SMITH.

WITH PLATES I–III.

Porcelia microcarpa Donnell Smith.—Pubens. Folia membranacea, adulta praeter margines nervosque glabrescentia, obovato-elliptica abrupte acuminata, basi acuta. Pedunculi solitarii uniflori, bracteola mediana. Petala exteriora lineari-lanceolata pollicaria, interiora parum longiora angustiora. Stamina obpyramidalia. Ovula pauca subuniseriata. Baccæ stipitatæ parvæ breviter cylindricæ leviter constrictæ apiculatæ, seminibus 1–5 globosis compressis.

Shrub 6–9^{ft} high. Leaves distichous with very short internodes, 3–4 × 1$\frac{1}{4}$–1$\frac{1}{2}^{in}$, paler beneath, petioles 1$\frac{1}{2}^{l}$ long. Peduncles opposite to leaves, 5–7^{l} long, in fruit twice longer; bracteole ovate-lanceolate, 4^{l} long. Perianth pubescent, fuscous, membranaceous, 3–5-nerved; sepals ovate-lanceolate; exterior petals 3^{l} broad, the interior 14–15 × 2^{l}. Stamens subsessile, $\frac{1}{3}^{l}$ long, the dilated incurved apex of connective nearly as broad. Carpels 8–11, oblong, $\frac{1}{2}^{l}$ long, pilose, sessile on truncate apex of hemispherical torus, ovules 4–7, the middle ones occasionally biseriate. Berries 3–4, 9–11 × 5^{l}, the interior ones often globose and 1-seeded, stipe 1–2^{l} long, seeds 4^{l} in diameter, longitudinally encircled by a groove.—*Porcelia Nicaraguensis* Benth. (represented in the series of *exsiccatæ* by nos. 474, 4,508, 4,519, 5,041), remarkable by petals 4–5^{in} long, presents a similar structure of flowers, but the seeds are biseriate and numerous.—Shores of Rio Ocosito, Depart. Quezaltenango, Guat., alt. 300^{ft}, Apr. 1892, J. D. S., no. 1,484.

Cymbopetalum stenophyllum Donnell Smith.—Absque pistillis glaberrimum. Folia anguste oblongo-lanceolata longiuscule acuminata ad basim acutam inaequilatera membranacea pellucido-punctula, petiolis brevissimis. Pedunculus folio aut summo aut pænultimo oppositus ab eoque ter quaterve superatus. Petala interiora magna ovalia quasi calceiformia, exteriora triente minora orbiculari-ovata. Stamina brevia. Pistilla numerosa, stigmate oblique bivalvato uncinato.

A shrub 12–15^{ft} high. Leaves distichous, 6–7 × 1$\frac{1}{2}$–1$\frac{3}{4}^{in}$. Peduncle erect, .1–1$\frac{1}{2}^{in}$ long, ebracteolate. Flower 2$\frac{1}{2}^{in}$ in diam. Sepals minute, broader than long. Petals glabrous, virescent, transversely wrinkled; the exterior membranaceous, plane, 8–9^{l} long, apiculate; the interior fleshy, 12–14 × 10–11^{l}, very concave, the inflexed margins 3–4^{l} broad. Stamens 2^{l} long, filament minute, gland-dilated apex of connective nearly glabrous. Torus hemispherical. Carpels 16–18, linear, compressed, with the nearly as long style added a little exceeding stamens, 5–6 ribs pubescent; stigma puberulous, bent back at apex; ovules 6–9. Berries not seen.—Banks of Rio Ocosito near Caballo Blanco, Depart. Quezaltenango, Guat., alt. 250^{ft}, Apr. 1892, J. D. S., no. 1,491.

CAPPARIS HEYDEANA Donnell Smith, in BOT. GAZ. **18**: 197. 1893. (*Char. amplif.*).—Glaberrima. Folia elliptico- vel obovato-oblonga 5–9-pollicaria utrinque acuminata, petiolis canaliculatis pollicaribus. Flores pauci in racemo terminali brevissimo dispositi, pedicellis petiolos æquantibus. Petala magna obovato-spathulata sepalis oblongis obtusis 8–10-linearibus in anthesi caducis triplo longiora. Stamina 6 cum carpophoro æquilongo petala pæne æquantia. Ovarium spurie 2-loculare, disci glandulis distinctis triangularibus. Bacca oblonga pollicaris carpophori dimidium æquiparans continua subtetragona parce verrucosa 4-locularis, loculamentis superpositis monospermis. PLATE I.

The additional characters are drawn from more complete specimens collected by M. Adolph Tonduz in Talamanca, Costa Rica, little above sea-level, Mch. 1894 (no. 8,528).[1]

---

[1] An exploration of the flora of Costa Rica upon a more extended scale than has heretofore been attempted in any part of Central America is now being prosecuted by MM. Pittier de Fábrega and Tonduz. The *exsiccatæ*, containing already some 9,000 numbers, serve as the basis of *Primitiæ Floræ Costaricensis*, a publication by MM. Durand and Pittier, assisted by various collaborators.

ZANTHOXYLUM LIMONCELLO Planch. et Œrst. To this species, which had been overlooked, must be referred the plant described as *Z. Costaricense* in BOT. GAZ. **13:** 190. 1888. It is represented in the series of *exsiccatæ* by nos. 4,755, 5,726.

Picramnia quaternaria Donnell Smith. — Pubescens. Foliola 9–15 plerumque dissociata glabra supra nitida elongato-lanceolata in apicem obtusum vel retusum sensim angustata præter terminale ad basim valde inæquilatera, ima immutata. Racemi terminales gemini simplices vel parce ramosi, pedicellis gracilibus fasciculatis, floribus 4-meris. Ovarium glaberrimum 2-loculare. Bacca nitida ovalis monosperma semine obovoideo, interdum bisperma seminibus plano-convexis.

Tree 20–30^{ft} high. Leaves 6–8^{in} long, petioles 1–2^{in} long and like rachis puberulous; leaflets 2–3^{in} × 7–10^{l}, approximated in pairs or chiefly scattered, oblique, base somewhat rounded on upper side with the lower narrowly cuneate; petiolules puberulous, 1$\frac{1}{2}^{l}$ long, the terminal twice longer. Racemes pubescent, equalling leaves, one in the pair usually with 1–3 branches; pedicels glabrous, chiefly 4–6-umbellate, 2^{l} long. Sepals ovate, aureo-pubescent, a rudimentary fifth one occasionally present. Petals lanceolate, 1^{l} long, thrice exceeding sepals, twice exceeding staminodes. Ovary shorter than petals; stigmas recurved, occasionally three. Berry 5–7 × 3–4^{l}, equaling pedicel; racemes densely fruited. Staminate flowers not seen. The single other species described with 4-merous flowers, *P. tetramera* Turcz., imperfectly characterized, appears to be represented by no. 8,492 Tonduz *Pl. Costaricenses* (fruited specimens with persistent sepals); it differs from the above by indument, less elongated contractedly acuminated leaflets pubescent beneath, the lower pair ovate and equilateral, axillary simple racemes, less densely fruited, obovate-ellipsoid pubescent berry, compressed seed.

Slopes of Volcán Fuego, Depart. Zacatepéquez, Guatemala, alt. 6,000^{ft}, Mch. 1892, J. D. S., no. 2,562. Jumaytepeque, Depart. Santa Rosa, Guat., alt. 6,000^{ft}, Mch. 1892, Heyde & Lux, no. 4,332. Buena Vista, Depart. S. Rosa, alt. 5,500^{ft}, Nov. 1892, Heyde & Lux, no. 4,333.

TRICHILIA SPONDIOIDES Sw., var. **gibbosifolia** C. DC.— Foliolis basi leviter inaequilateris latere longiore rotundatis.

Santa Rosa, Depart. S. Rosa, Guat., alt. 3,000^{ft}, Mch. 1893, Heyde & Lux, no. 4,453.

CUPHEA EPILOBIFOLIA Koehne, var. **canescens** Koehne.—Folia juniora pilis parallele adpressis densissimis incana, mox infra, demum supra glabrescentia. Pedicelli intrapetiolares. Ovarium villosum, stylus ovarii circ. 3-plum æquans. Cetera ut in var. Costaricensi Koehne.

Banks of Rio Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650^{ft}, Apr. 1894, J. D. S., no. 4,807.

Homalium Hondurense Donnell Smith (§ RACOUBEA Benth. in Journ. Linn. Soc. **4:** 33.).—Folia nitida obovato-elliptica subito acuminata, basi acuta, margine crenato. Racemi axillares, etiam in paniculam terminalem laxam dispositi, floribus canescentibus 5–7-meris, supremis solitariis pedicellatis, inferioribus autem ternis graciliter pedunculatis. Calycis tubus pedicellis brevior, segmentis quam petala dimidio brevioribus triploque angustioribus. Stamina terna. Ovarium hirsutum in stylos 3 distinctos longe productum.

Tree 30^{ft} high. Leaves 6–7 × 3–3$\frac{1}{2}^{in}$, thin-coriaceous, veiny, coarse crenatures glandular, petioles 2–3^{l} long. Racemes pubescent, equaling leaves, peduncles 5–7^{l} long, pedicels 2–4^{l} long, flowers chiefly 5-merous. Calyx-segments obtuse, equaling tube. Petals 2$\frac{1}{2}$–3 × 1–1$\frac{1}{2}^{l}$. Ovary equaling petals, styles very short, $\frac{1}{2}^{l}$, ovules 3 to each placenta.—Flowers about as large as those of *H. racemosum* Jacq., which differs chiefly by leaves, simple racemes, calyx-segments nearly equaling petals, slightly produced ovary. *H. pedicellatum* Spruce (no. 1,689 Spruce!) with similar inflorescence is distinct by foliage, large flowers, quinate stamens, etc.—Rio Permejo near San Pedro Sula, Honduras, alt. 600^{ft}, Sept. 1887, Dr. C. Thieme, no. 5,227.

Centropogon Guatemalensis Robinson.—Glabrous: stems flexuous: leaves ovate-oblong, acuminate at each end, commonly oblique at the base, crenate and denticulate, 4–7^{in} long, 2$\frac{1}{4}$–3^{in} broad; teeth very small, inconspicuous, incurved, acutish, glandular; midrib prominent upon both surfaces but much broader upon the under side; lateral nerves 7–9 pairs, widely spreading and strongly curved; terminal acumination rather abrupt and the point slender; petioles strongly compressed laterally and finely grooved above, 1–2^{in} long: raceme subcorymbose with 8–12 or more flowers; bracts oblong, acutish, denticulate, 4–7^{l} long; pedicels spreading, curved-ascending, the lower ones 1$\frac{1}{2}$–2^{in} long: calyx tube hemispher-

ical, slightly exceeding the adnate ovary; teeth ovate, obtusish, denticulate, purplish, 2–2½' long, about equaling the tube: corolla in a dried state deep purple, 2¼in long, cleft more than a third of the way to the base, usually granular-pubescent both upon the outer and inner surface: stamineal column about equaling the corolla, covered especially down one side with short blunt white hairs; the two smaller anthers densely tufted at the apex and with smaller spreading tufts at the base; the other anther cells sparingly hispid at the apex: fruit not seen.—Pansamalá forest, Depart. Alta Verapaz, Guat., alt. 3,800ft, June 1885, von Türckheim, no. 728.

Cavendishia callista Donnell Smith.—Omnibus in partibus praeter corollam glaberrima. Folia oblongo-ovata vel ovato-lanceolata acutissime acumïnata ad basim leviter cordata 5–7-plinervia subtus sparsim nigripunctula. Racemi subterminales elongati, pedicellis gracilibus. Calyx corollæ dimidium fere aequans, limbo campanulato ovarium altero tanto superante usque ad medium fisso. Stamina valde dimorpha.

Branchlets reddish, terete, estriate, somewhat flexuous. Leaves thick-coriaceous, 4–8×2–3½in; nerves prominent beneath, the interior pair ascending from near base to apex; petioles 4–5' long. Racemes geminate at apex of branchlets and single in uppermost axil, 4–5in long, exceeding subtending leaves; basal bracts orbicular, the interior 9–11' in diam.; rachis angulate, densely flowered; pedicels 5–6' long, basal bracts obovate, 9–12×4–6', half covering flowers; bractlets at middle of pedicel 2, lanceolate, 1' long; bracts and bractlets roseate, in anthesis persistent. Calyx 4–4½' long; tube angulate, intruded at base; segments ovate, 1½' long, acute tips coloured. Corolla cylindrical 10×3', puberulous, white, ovate lobes 1' long. Stamens connate at base, reaching to throat of corolla; larger anthers a half longer than the others with cells half as long as tubes and twice longer than filament, cells of smaller anthers nearly equaling tubes and half as long as filament. Berry (immature) glabrous.—Distributed as *C. pubescens* Hemsl. ? That species (nos. 290, 1,383 Bang *Pl. Boliv.* !; and nos. 3,184, 4,532 of this series) may be distinguished by indument, narrower leaves, short racemes, calyx-tube exceeding limb, nearly similar stamens, cano-hirsute berry.—Forests between Coban and Samac, Depart. Alta Verapaz, Guat., alt. 4,500ft, May 1886, von Türckheim, no. 941.—PLATE II.

Napeanthus apodemus Donnell Smith.—Caulis subnullus, foliis rosulatis obovato- vel oblongo-spathulatis integris ab initio glabris. Pedunculi in axillis singuli, floribus parvulis. Calyx fere partitus, tubo 5-alato, laciniis elongato-lanceolatis haud reticulatis. Corollæ subrotatæ tubus brevissimus prope basim zona purpurea notatus, lobi inaequales bis terve longiores. Stamina 3–4 cum alius rudimento. Capsula ovoidea cum stylo breviori adjecto calycem æquiparans.

Rhizome very short, fibrillose. Leaves alternate, sessile, semiamplexicaul, 3–4^{in} × 10–15^{l}, oblique, obtuse, membranaceous, granular-punctulate, 5–6 lateral nerves ascending to margin, reticulating veins invisible on pale undersurface. Peduncles 1–2^{in} long; panicles slender, dichotomous, surpassing leaves; bractlets pubescent, linear, 2–3^{l} long; pedicels 4–8^{l} long. Calyx pubescent, in fruit glabrate and $2\frac{1}{4} \times 1\frac{1}{4}^{l}$, minute wings decurrent from sinus to pedicel, segments 3-nerved. Corolla seen only before anthesis. Filaments very short; anther-cells oblong, diverging, distinct.—Of the other three described species, all South American, *N. Brasiliensis* Gardn. and *N. primulina* Benth. et Hook., *ex char.*, differ chiefly by developed stem, large leaves and flowers; *N. subacaulis* Benth. et Hook. (no. 2,506 herb. Bot. Gard. Trinidad!), imperfectly described, is distinguished by pointed leaves, larger and less deeply parted calyx, spherical capsule equaling style; and all differ by serrate and more or less pilose leaves, reticulated segments of wingless calyx. *N. Andina* Rusby *ined.* (no. 1,729 Bang *Pl. Boliv.!*) is remarkable by its campanulate tube of corolla exceeding the lobes.—Shaded precipitous banks of Rio Jiménez, Llanos de Santa Clara, Comarca de Limón, Costa Rica, alt. 650^{ft}, Apr. 1894, J. D. S., no. 5,109.

Arrabidæa dichasia Donnell Smith.—Folia bifoliolata, cirrho caduco, foliolis obovato-ellipticis abrupte acuminatis ad basim imam acutis coriaceis nitidis utrinque reticulato-nervosis, costis in utroque latere 4–5, petiolis cum petiolulis fere aequilongis brevibus. Thyrsi terminales ampli, ramis pluries dichotomis. Calyx campanulatus minutissime glandulo-lepidotus subinteger saepius laceratus. Corolla velutina supra calycem dilatata longe infundibuliformis, limbi obliqui lobis obovatis. Filamenta brevia.. Discus pulvinatus. Ovula numerosa.

Scandent (Thieme). Petioles 6–8^{l} long, petiolules 5–7^{l}; leaflets 4–5 × 2–$2\frac{1}{2}^{in}$, lateral nerves ascending to near margin.

Thyrsus broad, 8–10^{in} long; peduncle $1\frac{1}{2}$–3^{in} long; axes puberulous, minutely lepidote, the secondary 1–$1\frac{1}{2}^{in}$ long. Calyx as broad as long, 3^{l}, occasionally with a few large glands. Corolla $2\frac{1}{4}$–$2\frac{3}{4}^{in}$ long; tube nearly cylindrical, at middle 6–7^{l} broad, smooth within except paleaceous-barbate insertion of stamens at contracted base; lobes puberulous within, as broad as long, 7–9^{l}, contracted below. Stamens didynamous; filaments arcuate, 8–10^{l} long; anther-cells divaricate, 2^{l} long, connective round-apiculate. Ovary linear; lobes of stigma elliptical, 1^{l} long; ovules uniseriate at each placenta, 25–30 pairs to the cell. Capsules not seen.—According to the synoptical arrangement of species by Schumann in Engl. & Prantl *Nat. Pflanzenfam.* the above is to be grouped with *A. Chica* Bur. The leaves and inflorescence resemble more nearly those of *Distictis elongata* Bur. The whole plant becomes blackened as an *exsiccata.*

Sandy grounds near San Pedro Sula, Honduras, alt. 600^{ft}, May 1890, Dr. C. Thieme, no. 5,393.

ARRABIDÆA CHICA Bur., var. **viscida** Donnell Smith.—Folia trifoliolata, foliolis supra strigillosis subtus velutinis cuspidato-acuminatis, lateralibus quidem e basi oblique cordata 5-nervia orbiculari-ovatis, medio maximo e basi rotundata 3-nervia orbiculari-obovato interdum in cirrhum immutato lateralibus tunc ovato-lanceolatis. Paniculæ et terminales et axillares cum calycibus glandulo-viscidæ.

Casillas, Depart. S. Rosa, Guat., alt. 4,000^{ft}, May 1893, Heyde & Lux, no. 4,550.

Distictis Rovirosana Donnell Smith.—Folia recentiora stellato-canescentia, adulta praeter petiolos longos et nervos glabrata, foliolis oblongo-obovatis ad formam ovalem vel oblongo-ovatam ludentibus caudato-acuminatis, basi 3–5-nervia plerumque retusa. Thyrsi incani angusti foliis recentioribus bracteati in paniculam terminalem amplam dispositi, cymulis 3-chotomis. Calyx anguste campanulatus, dentibus mucronatis. Corolla recta campanulato-infundibuliformis. Discus latior quam altior. Ovula in utraque placenta 4-seriata. Capsula ecarinata glandulis magnis maculata ceterum glabra, seminibus in utroque loculo 15–18.

Trunk very stout, procumbent; branches scandent, striate, glandular-pubescent. Petioles 2–4^{in} long; leaves 3-foliate, or conjugate with a simple tendril, 4–6 × $2\frac{1}{2}$–3^{in}; terminal petiolule $\frac{3}{4}$–$1\frac{1}{4}^{in}$ long, 2–3 times exceeding the lateral. Thyrsi

stellate-tomentulose, often undeveloped and corymbiform; bractlets linear, 2–4^{l} long. Calyx velvety, $2\frac{1}{2}$–3^{l} long. Corolla velvety, roseate, $1\frac{3}{4}$–2^{in} long; contracted tube twice exceeding calyx, pubescent within; lobes subequal, subovate, 7–9^{l} long, pubescent within. Stamens inserted at contracted base of corolla, nearly attaining throat, anther-cells divaricate. Disk $\frac{1}{2}^{l}$ high, twice broader, somewhat cupulate. Ovary oval, lepidote, ovules 7–9 in each series. Capsule ligneous, oblong, $3\frac{3}{4} \times 1\frac{1}{2}^{in}$, acuminate, base rounded, valves thick, septum marked near margins with irregularly biseriate linear hila; seeds pubescent, suborbicular, 7–9^{l}, with wing added oblong and 2×1^{in}.—Very distinct from *D. elongata* Bur. and *D. Mansoana* Bur. (no. III, 50 ex herb. Brasil. Regnell. !), the only species that have been referred to *Distictis* as limited by Bureau.

Collected by Prof. José N. Rovirosa "in clivulis prope Atasta, Tabasco, Mexico, ubi vernacule *Pié de Gallo* dicitur, Maj. 1889, n. 488 Flora Mexicana." Also represented in this series: Obero, Depart. Escuintla, Guatemala, alt. 200^{ft}, Mch. 1892, J. D. S., no. 2,689: Papelón, Depart. Choluteca, Honduras, near sea-level, Feb. 1893, Shannon, no. 5,052: Rio Limón, Depart. Rivas, Nicaragua, near sea-level, Apr. 1893, Shannon, no. 5,053: Rio Sapoá, Depart. Rivas, Nicaragua, alt. 650^{ft}, Apr. 1893, Shannon, no. 5,054.

Tecoma evenia Donnell Smith.—Folia ampla minutissime lepidota ceterum glabrata 5-foliolata, petiolis petiolulisque semiteretibus, foliolis ellipticis acutis ad basim obtusis penninerviis, venis utrinque immersis. Thyrsi corymbiformes subhemispherici densiflori, axibus perbrevibus et calycibus rufotomentosis. Calyx obconicus, dentibus subaequalibus rotundatis mucronatis. Corolla supra calycem sensim ampliata longe infundibuliformis intus unilateraliter pubescens $\frac{1}{3}$-lobata, lobis obovatis pollicaribus punctulis.

Tree 25–30^{ft} high. Petioles 6–7^{in} long; leaflets coriaceous, the interior $5–7 \times 2\frac{1}{4}–3\frac{1}{4}^{in}$ with half as long petiolules, the exterior a half smaller with petiolules 5–7^{l} long; costæ to a side 8–10, very prominent beneath, straight, uniting in submarginal arches. Thyrsus sessile at apex (often furcate) of branches, 8–9^{in} broad, half as high; secondary axes subfasciculate, 4–5^{l} long, 3-chotomous, capitulate hairs glandular. Calyx 6–7^{l} long, exceeding pedicel. Corolla apparently roseate, 3^{in} long; tube below throat 6–8^{l} wide; lobes finely reticu-

late. Stamens half as long as tube of corolla; anther cells divaricate. Disk annular. Ovary linear; lobes of stigma obovate, 1[l] long; ovules irregularly pluri-seriate to the cell. Capsule not seen.—Leaves and inflorescence are very similar to those of *Couralia rosea* (*Tecoma rosea* Bertol.; *Tabebuia rosea* DC., § COURALIA), represented in the series of *exsiccatæ* by nos. 3,111, 4,912, 5,047, 5,388. That species differs by glaucous veiny leaflets, glabrous inflorescence, bilabiate calyx, uniseriate ovules to the placenta; the last character and the loculicidal dehiscence of capsule, *ex descr.*, seem to warrant its transfer to *Couralia*.

Santa Rosa, Depart. Santa Rosa, Guat., alt. 2,500[ft], Mch. 1892, Heyde & Lux, no. 3,110.

DURANTA MUTISII L., var. **Costaricensis** Donnell Smith.—Rami cum inflorescentia tomentulosi flavescentes, foliis subtus sordide pubescentibus supra puberulis, bracteis foliaceis stipitatis infimis florem superioribus calycem æquiparantibus.

Shrub 10–20[ft] high, growing in cultivated grounds at Estrella, Prov. Cartago, Costa Rica, alt. 4,400[ft], Apr. 1888, Juan J. Cooper, no. 6,007.—This may be presumed to be the undetermined species noted by Polakowsky (Die Pflanzenwelt von Costa Rica, p. 97) as occurring not far from the above locality.

CHAUNOSTOMA Donnell Smith, nov. gen. LABIATARUM.—Calyx obpyramidalis irregulariter plurinervis usque ad medium bifidus, lobis 5 subæqualibus triangularibus, fructiferens auctus. Corolla parva quasi oblonga, tubo breviter exserto, faucibus obliquissimis, labii postici erecti lobis semirotundis, antici longioris sub angulo nullo fere dejecti lobis lateralibus in marginem arcuatam declinatam reductis, lobo medio patente concavo integro. Stamina 4 didynima ascendentia longissime exserta, antica eminentiora, antherarum locellis divergentibus confluentibus. Discus crassus æqualis. Ovarium usque ad basim partitum, stylo staminibus æquilongo breviter bifido, lobis subulatis æqualibus. Nuculæ ovales leves, areola minuta oblique basali.—Inflorescentia axillaris simpliciter racemosa, pedicellis oppositis ad basim bracteatis in medio bibracteolatis unifloris.

Genus ob anomalam characterum conjunctionem sedem in systemate incertam occupat. Nomen inditum corollam latissime hiantem dicere vult.

Chaunostoma mecistandrum Donnell Smith.—Frutex orgyalis incanus stellato-tomentosus, internodiis brevissimis.

Folia crassa discoloria supra rugosa subtus dense velutina penninervia crenulata oblongo-elliptica vel oblongo-lanceolata utrinque acuta. Racemi a foliis bis terve superati, pedicellis calycem caeruleum aequiparantibus.

Leaves 5–6½ × 1½–2 . Petioles 6–9[l] long, equalling or exceeding internodes. Bracts and bractlets linear. Calyx bright-blue, 4[l] high, in fruit twice larger. Corolla (red ?) like calyx pubescent and aureo-punctulate, 7½[l] long, posterior lip 2[l] long and nearly equaling the arcuate sides of anterior lip, middle lobe 1[l] long. Stamens twice exceeding corolla, after anthesis declinate and contorted, anther-cells oblong and blue. Nucules black, shining, 1[l] long.—The racemes, as shown by presence of bractlets, are technically undeveloped thyrsi.—Growing in patches on shaded mountain-summits near Buena Vista, Depart. Santa Rosa, Guat., alt. 6,000[ft], Dec. 1892, Heyde & Lux, no. 4,368.—PLATE III.

Ocotea perseifolia Mez et Donnell Smith; foliis adultis subtus pilis brevissimis perobscurisque scabriusculis, late ovato-ovalibus, basi cordatis v. obtusis apice late breviterque acuminatis, penninervibus, utrinque laxe prominulo-reticulatis; inflorescentia submultiflora, abbreviate subthyrsoidea, foliis multo breviore; floribus hermaphroditis, minutissime peradpresseque tomentellis; perianthii tubo brevi; antheris subsessilibus; staminodiis fere abortivis; ovario glabro; stylo brevi.

Arbor v. frutex; habitu ramuli praesentis *Perseæ caeruleæ* memoriam revocat. Ramuli praesertim apicem versus±angulati, peradpresse paullo sericanti-tomentelli flavido-allutacei. Folia petiolis usque ad 20[mm] longis, optime canaliculatis stipitata, sparsa, coriacea, sicca supra olivaceo-viridia subnitida subtus pallida opaca, usque ad 0.2[m] longa, 0.12[m] lata, venis dorso ± manifeste rubentibus. Inflorescentia peradpresse pallide tomentella; pedicellis ±2[mm] longis, bracteolis deciduis. Flores 3–3.5 longi, limbi tubo obconico, segmentis ovalibus, acutiusculis, papillulosis. Antheræ rectangulares, rotundatæ vel truncatæ, papillosæ; glandulæ ser. III. parvæ, globosæ, sessiles, basales. Ovarium crasse ovoideum, stylo 5–6-plo breviore, stigmate obtuso. Fructus ignotus.

Yzabal, Depart. Yzabal, Guat., alt. 120[ft], Apr. 1889, J. D. S., no. 1,807.

Dioscorea cyanisticta Donnell Smith. (§ALLOCTOSTEMON Griseb. in Fl. Bras.).—Absque rhachibus glabra. Folia cordiformia acuminata 11-nervia. Spicæ in axillis aggregatæ,

in panicula evoluta singulæ, flaccidæ, rhachibus complanatis, glomerulis distichis, floribus subsessilibus binis aut ternis parvulis. Stamina a segmentis patulis perianthii partiti triplo superata staminodiis filiformibus puberulis aequilonga, locellis discretis. Ovarii rudimentum nullum.

Stem stout, procumbent, branchlets twining. Younger leaves ovate-lanceolate from an acute or rounded base; the mature as broad as long, 5–6 , more or less acuminated, sinus broad and shallow, twice to thrice exceeding petioles, membranaceous, pellucid-lineolate, spotted beneath toward base with numerous large blue glands. Spikes subsessile, 4–6^{in} long, rachis puberulous, clusters approximated; flowers minutely pedicellate, occasionally solitary, equalling elongate-lanceolate bract. Perianth $1\frac{1}{2}^{l}$ in diam.; segments oblong, obtuse, 1-nerved. Filaments inserted at base of segments, little exceeding anthers. Feminine spikes not seen.—Growing over rocks along shores of Rio Turrialba, Prov. Cartago, Costa Rica, alt. 1,600^{ft}, Mch. 1894, J. D. S., no. 4,969.

Baltimore, Md.

Explanation of Plates I–III.

I. *Capparis Heydeana.*—Fig. 1, flowering branch.—Fig. 2, carpophore with ovary.—Fig. 3, section of ovary.—Fig. 4, sepal.—Fig. 5, petal.—Fig. 6, stamen.—Fig. 7, carpophore with berry.—Fig. 8, section of berry. (Figures 3 and 8 are somewhat enlarged; the others are natural size.)

II. *Cavendishia callista.*—Fig. 1, flowering branch.—Fig. 2, interior bract subtending raceme.—Fig. 3, bract subtending pedicel.—Fig. 4, flower with pedicel.—Fig. 5, section of flower with corolla removed.—Fig. 6, corolla laid open.—Figs. 7 and 8, stamens. (Figs. 1–4 are natural size; the others are somewhat magnified.)

III. *Chaunostoma mecistandrum.*—Fig. 1, flowering branch.—Fig. 2 calyx laid open with pistil.—Fig. 3, corolla in profile with stamens.—Fig. 4, corolla laid open with stamens.—Fig. 5, an anther.—Fig. 6, disk with ovary.—Fig. 7, nucule. (Figures 1 and 2 are natural size; the others are variously enlarged.)

[From the Botanical Gazette, Vol. XX.]

Undescribed plants from Guatemala and other Central American Republics. XV.

JOHN DONNELL SMITH.

Duguetia leiophylla Donnell Smith.—Folia oblongo-lanceolata acuminata basi obtusata vel acutiuscula glaberrima venulosa aureo-punctula, margine revoluto. Pedunculi uniflori, bractea versus basin sita parvula. Sepala minuta triangulari-ovata; petala ovalia subaequalia subtus lepidota, margine pubescente, ceterum glabra; torus disciformis crassus cum genitalibus glaber; styli concreti basi articulati ovaria aequantes eisque paululum crassiores.

A low, spreading tree (Thieme). Leaves slightly coriaceous shining, $3–4\frac{1}{4} \times 1\frac{1}{2}–1\frac{3}{4}$ in, petioles 2^{l} long. Peduncles terminal or becoming leaf-opposed, articulated above base, glandular-lepidote, $6–8^{l}$ long, bract ovate (1^{l}) with pubescent margin. Sepals 3, free, thick, glandular-lepidote, margin pubescent, $1\frac{1}{2}^{l}$ long. Petals 6, 2-seriate, fleshy, imbricate, erecto-patent, explanate, $14–17 \times 10–12^{l}$, each end rounded, shortly unguiculate. Torus somewhat obversely hemispherical, 1^{l} high, ecostate; gynophore plane, 2^{l} in diam., areolated with facets of carpels. Stamens all fertile, cuneate, $1 \times \frac{1}{2}^{l}$. Ovaries 50–70, columnar ($\frac{2}{3}^{l}$), angular; ovule solitary, basal. Fruit not seen.

San Pedro Sula, Depart. S. Bárbara, Honduras, alt. 800^{ft}, Apr. 1890, C. Thieme, no. 5,129.

Serjania punctata Radlk.—Scandens, fruticosa, glabra; rami subaequaliter 6-costati, costis obtusis, 6-sulcati, cortice e viridi pallescente; corpus lignosum compositum e centrali majore et peripheric is 2–3 parvis, teretiusculis, centrali impositis; folia biternata; foliola lateralia ovata, obtusiuscula vel subacuta, sessilia, terminalia elliptica, breviter acuminata et mucronulata, basi attenuata, omnia remotiuscule leviter serrata, membranacea, reti venarum tenero nec prominente in-

structa, glabra, nec nisi glandulis microscopicis adspersa, punctis pellucidis conspicuis iisque prominentibus insignita, epidermide mucigera; petiolus communis nudus, partialium intermedius (in foliis inferioribus certe) superne marginatus; thyrsi solitarii, dense cincinniferi; cincinni stipitati, pedicellis prope basin articulatis; flores minores; sepala exteriora minutim puberula interioribus tomentellis dimidio breviora; fructus ——.

Rami thyrsigeri diametro 3^{mm}. Folia circ. 10^{cm} longa, 8^{cm} lata; foliola terminalia 4.5^{cm} longa, 2.5^{cm} lata, lateralia superiora 4^{cm} longa, 2^{cm} lata, inferiora dimidio minora; petiolus communis circ. 4^{cm} longus, partialium intermedius 2^{cm}, laterales 8^{mm} longi; stipulæ parvæ, ovato-triangulares. Thyrsi folia superantes, rhachi quam pedunculus communis paullo longiore; cincinni circ. 8-flori, stipite $3–4^{mm}$ longo suffulti, pedicelli 2^{mm} longi. Flores masculi: sepala exteriora 1.5^{mm}, interiora vix 3^{mm} longa. Petala angustiora, ex oblongo attenuata, 3.5^{mm} longa, 1.5^{mm} lata, intus laxe glanduligera; squamæ ciliolatæ, superiores crista bifida (laciniis acutis apice patulis) appendiceque brevi barbata, inferiores crista inaequaliter bicruri instructæ. Tori glandulæ superiores ovatæ, obtusæ, glabræ, laterales minores orbiculares. Stamina basi pilosiuscula. Germinis rudimentum ad angulos pilosiusculum.

Affinis *S. mucronulatæ* (in sect. XI, PHYSOCOCCUS), a qua differt costis ramorum obtusissimis, petiolo intermedio superne marginato, foliolorum punctis pellucidis majoribus.

Cuajiniquilapa, Depart. S. Rosa, Guat., alt. $2,500^{ft}$, Oct. 1894, Heyde & Lux, no. 6,091.

Paullinia hymenobracteata Radlk.—Scandens, fruticosa, hirsuta; rami trigoni vel subteretes, striato-sulcati, pilis patentibus e sufferugineo pallescentibus vestiti; corpus lignosum compositum e centrali majore et peripheric is 3 minoribus partim quodammodo complanatis in centrale plus minus immersis; folia 5-foliolato-pinnata; foliola terminalia rhombea, in acumen acutum angustata, supra medium grossiuscule inaequaliter dentata, lateralia superiora ovalia, basi acuta, inferiora ovata, basi inaequilatera rotundata, apice acuta vel obtusata, a basi remotiuscule dentata, breviter petiolulata, membranacea, supra pilis setulosis adpressis laxe adspersa vel praeter nervos glabra, subtus subhirsuta necnon glandulis microscopicis curvatis vel geniculatis obsita, minutim pellucide punctata retique utriculorum lacticiferorum subtus instructa,

epidermide parum mucigera; rhachis nuda; stipulæ insignes, semicordato-deltoideæ, subacuminatæ, basi subbilobæ, inter lobos oblique affixæ, lobo interiore (i. e. folii medianam spectante) majore, scariosæ, extus hirsutæ; thyrsi axillares, inferiores folia subduplo superantes breviores paniculatim congesti, subhirsuti; bracteæ bracteolaeque conspicuæ, oblongæ, tenuiter scarioso-membranaceæ, concavæ, apice margineque necnon dorso secus medianam pilis longioribus obsitæ; flores mediocres pedicellique supra articulationes tomentelli.

Rami diametro 2–4^{mm}. Folia superiora 16–18^{cm} longa, 10–12^{cm} lata, inferiora duplo majora; foliola lateralia 5–6^{cm} longa, 2.5–3^{cm} lata, terminalia subduplo majora, sicca subfusca; petiolus communis circ. 4^{cm}, rhachis 3^{cm} longa, subhirsuta, petioluli 2–3^{mm} longi; stipulæ 7^{mm} longæ, 5–6 latæ. Cincinni stipitati, stipite 5–6^{mm} longo hirsuto; pedicelli 3^{mm} longi, infra medium articulati, infra articulationes hirsuti; bracteæ 5^{mm} longæ, 2^{mm} latæ, bracteolæ (prophylla) vix tertia parte minores. Alabastra obovata, 3–4^{mm} longa. Sepala interiora 4–5^{mm} longa, exteriora breviora. Petala obovata, intus glandulis microscopicis adspersa; squamæ margine villosiusculæ, superiores crista obcordata appendiceque deflexa squamam dimidiam longitudine superante villosa instructæ. Tori glandulæ ovatæ, basi villosiusculæ. Stamina pilosa. Germinis rudimentum puberulum.

Affinis videtur *Paullineæ monogynæ* Radlk. (in sect. XII, CALOPTILON). Ad eandem *P. hymenobracteatam* pertinet Tate no. 59!, ann. 1867 in Nicaragua lecta, in Hb. Kew. servata (*Paullinia sp.* Hemsley in Salvin et Godm. Biol. Centr.-Am., Bot. **1:** 211. 1879–81. [no. 17.]).

Malpais, Depart. S. Rosa, Guat., alt. 4,000^{ft}, Sept. 1894, Heyde & Lux, no. 6,093.

Dalea cinerea Moric. ex sched. Bentham in herb. Kew.; erecta, sublignosa, caule striato, undique fulvo-tomentoso, ramis erectis, foliis imparipinnatis, pubescentibus, foliolis 4–5 jugis, subtus glandulosis, floribus in spicas densas, terminales, congesti, siccitate nigricantibus. S 1

Suffrutex videtur 1.5–2^{ped}. Caules erecti, ramis ascendentibus, dense fulvo-tomentosis. Stipulæ lineari-setaceæ, rigidiusculæ, 1–1.5^{lin} longæ, folia vix pollicem longa, usque ad basim petioli foliolata, petiolo gracili, fulvo-pubescente. Foliola 3–4 juga, sessilia, ovata, obtusa, utrinque pubescentia, ciliata, subtus glandulis nigris irregulariter obsita, 2^{lin} longa.

Spicæ ad apicem ramorum terminales, densifloræ, 1.5–2^{poll} longæ, siccitate nigricantes. Bracteæ late cordato-ovatæ, carinatæ, longe acuminatæ, florem amplectentes, 1.5^{lin} longæ, persistentes. Calyx pubescens, coriaceus, 5-dentatus, lacinia carinali longiore, tubo 10-nervio, glanduloso, 1.5^{lin} longo. Vexillum cordato-orbiculare, longe stipitatum, carina brevius, 1.5^{lin} longum. Alæ rectæ, stipitatæ, vexillum vix superantes, lateraliter plicatæ. Carina recta, obtusa, stipitata, glandulis raris notata, vexillum superans 2^{lin} longa. Stamina monadelpha, vagina supra fissa. Antheræ parvæ, nutantes, ad apicem glandulosæ. Ovarium sessile, ovatum, dense tomentosum. Legumen calyce coriaceo inclusum membranaceum, pubescens.

Haec planta ad specimen in herb. Kew. servatum et a cl. Bentham sub nomine *D. cinerea* Moric. labellatum pertinet. Sed nunquam in libris, herbariis, etc. Moricand, hoc nomen occurrit. Verisimiliter hoc nomen errore cl. Bentham hic adest et planta nondum descripta fuit. Nobis species bene delimitata videtur sed genus Dalea revisionem aegre caret. (M. Micheli.)

Santiago, Depart. Zacatepéquez, Guat., alt. 6,500^{ft}, 1891, Rosalió Gómez, no. 999.—Embaulada, Depart. Zacatepéquez, Guat., alt. 5,500^{ft}, Dec. 1889, Heyde & Lux, no. 4,465.

GLIRICIDIA MACULATA HBK., var. **multijuga** Micheli. Differt foliolis 7–8- nec 3–5-jugis, minoribus et magis pubescentibus.

S. Rosa, Depart. S. Rosa, Guat., alt. 3,000^{ft}, Apr. 1892, Heyde & Lux, no. 3,296.

ÆSCHYNOMENE AMERICANA L., var. **longifolia** Micheli. Quam planta typica in omnibus partibus major, magis robusta, folia longiora, foliolis latioribus, magis nervosis, racemi densiores, flores longiores, carina obtusa.

Cassillas, Depart. S. Rosa, Guat., alt. 4,000^{ft}, Oct. 1892, Heyde & Lux, no. 4,172.—S. Juan Utapa, Depart. S. Rosa, Guat., alt. 4,500^{ft}, Oct. 1894, Heyde & Lux, no. 6,099.

Desmodium Hondurense Micheli; lignosum vix scandens dense velutino-tomentosum, stipulis linearibus, foliis trifoliolatis, stipellatis, floribus parvis in racemos densos, axillares congestis, legumine dense tomentoso, articulis sibi invicem replicatis.

Frutex ramulis gracilibus, tomentosis. Folia petiolata, pinnatim trifoliolata. Stipulæ lineares, acutæ, tomentosæ.

Petiolus communis dense tomentosus, 4^{lin} longus. Foliola ovata vel anguste ovata, obtusa, terminale stipellatum, distans, $1\frac{1}{2}$–2^{poll} longum, 5–6^{lin} latum, lateralia minora, senilia omnia crassiuscula, superne puberula, subtus dense crispo-tomentosa. Racemi axillares vel terminales, sub anthesi 4–5^{poll} longi, rachi fere a basi florifero. Flores breviter pedicellati, secus rachin ternati vel fasciculati, purpurascentes, parvi, congesti; bracteæ parvæ, lineares, caducæ. Calyx fere bilabiatus, labio superiore tridentato, inferiore bidentato, dense tomentosus, vix lineam longus. Vexillum basi nudum, latum, fere orbiculare, breviter unguiculatum, $2\frac{1}{2}^{lin}$ longum, alæ carinæ leviter adhaerentes, 2^{lin} longæ, carina vix curvata, late obtusa vel truncata. Stamen vexillare e basi liberum. Ovarium 3–4-ovulatum. Legumen (junius) dense tomentosum, articulis 3–4, omnibus fertilibus, e calyce exsertis, sibi invicem replicatis.

Species verisimiliter e sectione Chalarium (nisi stamine vexillari libero); fructus structura ad *D. plectocarpum* Hemsley Diag. Pl. Nov. pars 3, p. 46 pertinet.

San Pedro Sula, Depart. S. Bárbara, Honduras, alt. 600–1,000^{ft}, Febr. 1887 and Apr. 1890, C. Thieme, nos. 5,197 & 5,207.

CALLIANDRA PORTORICENSIS Benth., var. **multijuga** Micheli.—Inflorescentia, floribus, legumine omnino *C. Portoricensis* Benth.; differt pinnis 7–8- nec 2–4-jugis.

Casillas, Depart. S. Rosa, Guat., alt. 4,000^{ft}, Jan. 1893, Heyde & Lux, no. 4,148.—San Juan Utapa, Depart. S. Rosa, alt. 4,500^{ft}, Oct. 1893, Heyde & Lux, no. 6,098.

Pithecolobium insigne Micheli; puberulum, foliolis bigeminis, amplis, floribus spicatis, magnis, spicis ad apicem ramorum racemosis.

Arbor vel frutex, in partibus junioribus puberulum, caeterum glabrescens, stipulæ ignotæ. Folia bipinnata, pinnis unijugis. Petiolus communis gracilis, 2–$2\frac{1}{2}^{poll}$ longus, glandulis ad apicem et inter pinnas parvis, vix elevatis rachis $1\frac{1}{2}^{poll}$ longus. Foliola unijuga, ampla, 5^{poll} longa, $1\frac{1}{2}$–2^{poll} lata, glabra, penninervia, subcoriacea, oblique ovata, ad apicem sensim attenuata, longiuscule acuminata, acuta. Pedunculi ad apicem ramorum longe laxeque racemosi; spicæ 5–7^{poll} longæ, supra medium floriferæ, rachi velutine puberulo. Flores sessiles, secus rachin haud congesti, bracteis minutis fulti. Calyx dense velutino-puberulus, fere 2^{lin} lohgus, 5–7-

dentatus. Corolla velutina, 3[lin] longa, 5–7-fida. Stamina indefinita, filamentorum tubo corollam paullo excedente. Antheræ parvæ, eglandulosæ. Pollen in massas coalitum. Ovarium sessile, puberulum. Legumen ignotum.

Species magnitudine florum et foliorum insignis; fructu absente determinatio incerta. Notis plurimis tamen ad genus Pithecolobium rite pertinere videtur. A sectione Caulanthon imprimis affini differt petiolis glandulosis et pedunculis racemosis.

San Pedro Sula, Depart. S. Bárbara, Honduras, alt. 600[ft], Apr. 1890, C. Thieme, no. 5,208.

CENTRADENIA FLORIBUNDA Planch., var. **grandifolia** Cogn.—Planta robustior. Folia magna, glabrata, majora 6–11[cm] longa et 1.5–3[cm] lata.

Palin, Depart. Amatitlan, Guat., alt. 3,560[ft], Febr. 1892, J. D. S., no. 2,645.—Rio Samalá, Depart. Retalhuleu, Guat., alt. 1,700[ft], Apr. 1892, J. D. S., no. 2,651.

Arthrostemma hirtella Cogn.; caule herbaceo; ramis junioribus petiolis pedunculis calycibus foliisque subtus setulis brevissimis adpressis sparse hirtellis; foliis parvis, breviter petiolatis, elliptico-ovatis, obtusis, basi obtusiusculis, margine integerrimis vel obscure crenulatis, sparse adpresseque setoso-ciliatis, trinerviis; floribus solitariis, axillaribus vel ad ramulum brevissimum terminalibus; calycis tubo campanulato, segmentis anguste triangularibus, vix ciliatis, tubo subaequilongis; staminibus valde inaequalibus, majorum connectivo basi profunde bifido, minorum connectivo ultra insertionem filamento vix porrecto basi integro; ovario superne breviter denseque setoso.

Rami satis graciles, acutiuscule tetragoni. Petiolus gracillimus, 2–4[mm] longus. Folia rigidiuscula, supra intense viridia, subtus pallidiora, 12–22[mm] longa, 8–15[mm] lata. Pedicelli graciles, 1–1.5[cm] longi. Calycis tubus 6[mm] longus, apice 4[mm] latus; segmenta subreflexa, 5[mm] longa, basi 3[mm] lata. Petala purpurea, anguste obovata, brevissime glanduloso-ciliata, 12[mm] longa. Capsula obovoidea, 7–8[mm] longa.

San Miguel Uspantán, Depart. Quiché, Guat., alt. 6,000[ft], Mch. 1892, Heyde & Lux, no. 3,328.

Conostegia viridis Cogn.; ramis junioribus petiolis pedunculis calycibusque densiuscule furfuraceo-puberulis; foliis membranaceis, ovatis, breviuscule acuminatis, basi rotundatis vel subemarginatis, acute minuteque duplicato-dentatis ciliatis-

que, 5-plinerviis fere 5-nerviis, supra tenuissime punctato-furfuraceis et breviter sparseque setosis, subtus ad nervos nervulosque leviter stellato-furfuraceis caeteris glabratis; floribus 5-meris, subsessilibus; alabastris anguste obovoideis, obtusiuscule acuminatis.

Rami robustiusculi, obscure tetragoni. Petiolus 2.5–3.5^{cm} longus. Folia supra intense viridia, subtus laete viridia, 10–13^{cm} longa, 6–7^{cm} lata, nervis nervulisque subtus satis prominentibus. Paniculæ corymbiformes, multifloræ fere 1^{dm} longæ. Alabastra cinerea, 6–7^{mm} longa, 4^{mm} crassa. Petala oblique obovata, 5^{mm} longa. Antheræ oblongæ, subrectæ, fere 2^{mm} longæ. Stylus crassus, 5^{mm} longus, stigmate non dilatato. Fructus nigricans, depresso subglobosus, 5–6^{mm} crassus.—Species *C. subcrustulatæ* Triana (Cogn. in DC. Monogr. Phan. **7:** 709) proxima, sed foliis 5-plinerviis, etc.

San Felipe, Depart. Retalhuleu, Guat., alt. 2,050^{ft}, Apr. 1892, J. D. S., no. 2,650.

Var. **angustifolia** Cogn.—Petiolus 5^{cm} longus. Folia oblonga, distincte 5-plinervia, basi acuta vel subacuta 17^{cm} longa, 6–6.5^{cm} lata.

Primavera, Depart. Sololá, Guat., alt. ,760^{ft}, July 1891, Shannon, no. 487.

Miconia Donnell-Smithii Cogn. (§ AMBLYARRHENA); glaberrima; ramis teretiusculis; foliis satis parvis, breviter petiolatis, pergamentaceis, lanceolatis, longuiscule angusteque acuminatis, basi cuneatis, integerrimis, leviter triplinerviis; floribus 5-meris, longuiscule pedicellatis; calycis tubo suburceolato, dentibus anguste triangularibus, tubo triplo brevioribus; stylo apice truncato.

Rami gracillimi, leviter ramulosi. Petiolus gracilis, circiter 1^{cm} longus. Folia 5–7^{cm} longa, 1.5–2^{cm} lata, nervis supra impressis, subtus valde prominentibus, nervulis paulo distinctis. Paniculæ pyramidatæ, laxæ, submultifloræ, 6–9^{cm} longæ; pedicelli 4–7^{mm} longi, sub apice articulati. Calycis tubus 3^{mm} longus, apice leviter constrictus; dentes erecti, vix 1^{mm} longi. Petala subrotundata, 1.5^{mm} longa. Antheræ rectæ, 1.5^{mm} longæ. Stylus crassiusculus, rectus, 4–5^{mm} longus.—Species *M. pergamentaceæ* Cogn. (DC. Monogr. Phan. **7:** 873) proxima.

San Miguel Uspantán, Depart. Quiché, Guat., alt. 6,000^{ft}, Apr. 1892, Heyde & Lux, no. 3,333.

Miconia alpestris Cogn. (§ CREMANIUM); ramis superne obtuse tetragonis et leviter compressis, junioribus petiolis pedunculis calycibusque dense stellato-furfuraceis; foliis majusculis, longiuscule petiolatis, obovato-lanceolatis, longiuscule subabrupteque acuminatis, basi late cuneatis, integerrimis, triplinerviis fere trinerviis, supra primum furfuraceis demum glabris, subtus ad nervos densiuscule stellato-furfuraceis cæteris glabratis; floribus 5-meris, brevissime pedicellatis calyce subhemisphærico, dentibus brevibus, obtusiusculis, carnosulis; antheris biporosis; stylo brevi, apice truncato.

Rami robustiusculi, apice fuscescentes. Petiolus satis gracilis, fuscescens, 2–5^{cm} longus. Folia erecto-patula, rigidiuscula, supra intense viridia, subtus satis pallidiora, 12–17^{cm} longa, 4–7^{cm} lata, nervis subtus satis prominentibus. Paniculæ late pyramidatæ, multifloræ, 5–8^{cm} longæ; pedicelli sæpius vix 1^{mm} longi. Calycis tubus fuscescens, 2^{mm} longus, 2.5^{mm} latus; dentes erecti, 0.5^{mm} longi. Petala obovata, apice leviter emarginata, 2^{mm} longa. Antheræ 1^{mm} longæ. Stylus rectus, 2^{mm} longus.—Species *M. carneæ* Cogn. (DC. Monogr. Phan. 7: 912) proxima. San Miguel Uspantán, Depart. Quiché, Guat., alt. 7,500^{ft}, Apr. 1892, Heyde & Lux, no. 3,334.

Clidemia radicans Cogn. (§ CALOPHYSOIDES); caule brevi, repente, radicante; ramis junioribus petiolis pedunculisque brevissime denseque stellato-puberulis; foliis valde inæqualibus et dissimilibus, integerrimis, trinerviis, supra primum puberulis demum glabris, subtus ad nervos nervulosque densiuscule stellato-furfuraceis cæteris glabratis majoribus brevissime petiolatis satis obliquis oblongis acutis basi leviter inæqualibus subrotundatis, minoribus sessilibus ovatis vel suborbicularibus; racemis axillaribus vel interdum terminalibus, breviusculis, paucifloris; floribus 5-meris, breviter pedicellatis; calyce urceolato, leviter furfuraceo, brevissime 5-dentato.

Rami graciles, breviusculi, leviter flexuosi, teretiusculi, cinerei, paulo ramulosi. Petiolus satis gracilis, 2–5^{mm} longus. Folia membranacea, supra saturate viridia, subtus viridi-cinerea; majora erecta vel erecto-patula, 10–17^{cm} longa, 3–5.5^{cm} lata; minora patula, 1.5–4^{cm} longa, 14–20^{mm} lata. Racemi erecti, 4–6^{cm} longi; pedicelli 2–3^{cm} longi. Calyx cinereo-fuscus, ultra medium satis constrictus, 2.5^{mm} longus, inferne 2^{mm} latus. Petala patula, suborbicularia, 1.5^{mm} lata. Antheræ lineares, leviter arcuatæ, 1.5^{mm} longæ. Stylus rectus, 3^{mm}

longus, stigmate punctiformi. Bacca depresso-sphærica, distincte 10-costata, intense cyanea, 4–5^{mm} crassa.

Jiménez, Llanos de S. Clara, Comarca de Limón, Costa Rica, alt. 650^{ft}, Apr. 1894, J. D. S., no. 4,789.—Collected also by M. Pittier in the valley of Rio Reventazon, Costa Rica, 1893 (no. 8,123).

Clidemia glandulifera Cogn. (§ SAGRÆA); ramis junioribus pedunculis calycibusque brevissime denseque stellato-tomentosis et pilis patulis brevibus glandulosis densiuscule vestitis; foliis longiuscule petiolatis, satis disparibus, anguste ovatis, acutis vel breviter acuminatis, basi rotundatis, integerrimis, supra pilis simplicibus brevissimis dense hirtellis, subtus brevissime denseque stellato-pilosis, majoribus 7-nerviis, minoribus 5-nerviis; paniculis longiusculis, pyramidatis, multifloris; floribus 4-meris, subsessilibus; calyce campanulato, brevissime dentato.

Rami satis graciles, juniores teretiusculi, sordide fusci. Petiolus brevissime denseque stellato-tomentosus et sparsissime breviterque glandulosa-pilosus, 3–7^{cm} longus. Folia submembranacea, supra intense viridia, subtus cinerea, 12–15^{cm} longa et 7–8^{cm} lata, minora subdimidio breviora et angustiora. Paniculæ patulæ, 7–10^{cm} longæ. Calyx cinereo-fuscus, 3^{mm} longus. Petala obovata, 3^{cm} longa. Antheræ lineares, subrectæ, 2.5–3^{mm} longæ. Stylus capillaris, 5–7^{mm} longus, stigmate punctiformi. Bacca nigricans, subglobosa, 4–5^{mm} crassa.

San Miguel Uspantán, Depart. Quiché, Guat., alt. 6,000^{ft}, Apr. 1892, Heyde & Lux, no. 3,329.

Pittiera trilobata Cogn.; ramis junioribus petiolis cirrhisque breviter sparseque pilosulis; foliis breviuscule petiolatis, rigidiusculis, late ovatis, leviter vel usque ultra medium trilobatis, basi profundiuscule emarginatis, supra scabris, subtus ad nervos densiuscule breviterque asperis caeteris brevissime denseque pubescenti-scabriusculis;calyce brevissime denseque puberulo, tubo breviter campanulato-subcylindrico, segmentis triangulari-lanceolatis, tubo satis longioribus; corollæ segmentis obovato-oblongis, acutis vel breviter acuminatis; staminum filamentis basi pilosulis.

Rami graciles, elongati, paulo ramulosi, leviter sulcati. Petiolus satis gracilis, profunde striatus, 2–5^{cm} longus. Folia supra intense viridia, subtus viridi-cinerea, margine remotiuscule spinuloso-denticulata, 7–10^{cm} longa, 6–9^{cm} lata; nervi

subtus paulo prominentes, duo laterales trifurcati imum sinum leviter marginantes. Cirrhi robusti, elongati, sulcati, saepius 5-fidi. Pedunculus masculus satis gracilis, brevissime et densiuscule puberulus, 7–26^{cm} longus. Calycis tubus 10–13^{mm} longus, superne circiter 1^{cm} latus; segmenta erecto-patula, 15–18^{mm} longa, basi 5^{mm} lata. Corolla membranacea, utrinque leviter furfuraceo-puberula, 2.5^{cm} longa. Staminum filamenta filiformia, 11–12^{mm} longa; capitulum antherarum ovoideo-conicum, 1^{cm} longum, 6^{mm} crassum. Fructus oblongus, laevis, 8^{cm} longus, 3^{cm} crassus. Semina ovata, apice obtusa, basi obscure tridentata, margine subalata, 1^{cm} longa, 7^{mm} lata, 1.5^{mm} crassa.

Buena Vista, Depart. S. Rosa, Guat., alt. 5,500^{ft}, Dec. 1892, Heyde & Lux, no. 4,189.

Schizocarpum Guatemalense Cogn.; foliis longiuscule petiolatis, ambitu ovatis, leviter vel usque ad medium trilobatis, supra glabratis, subtus brevissime et densiuscule puberulis, basi leviter emarginatis; nervis lateralibus imum sinum non vel vix marginantibus; calycis tubo brevissimo, late campanulato, segmentis triangulari-linearibus, tubo multo longioribus; corollæ segmentis longe acuminatis; fructu anguste ovoideo, apice longiuscule rostrato.

Rami gracillimi, elongati, sulcati, glabrati vel leviter puberuli. Petiolus gracilis, striatus, brevissime et densiuscule hirtellus, 2–4^{cm} longus. Folia tenuiter membranacea, intense viridia, margine vix denticulata, 6–10^{cm} longa, 4–7^{cm} lata; lobus terminalis triangularis vel oblongus, acutus, laterales multo breviores, obtusi. Cirrhi filiformes, inaequaliter bifidi, sulcati, glabrati. Pedunculus masculus gracilis, densiuscule et brevissime puberulus, 3–4^{cm} longus. Calyx furfuraceus et longiuscule sparseque pilosus, tubo 3^{mm} longo, 4–5^{mm} lato, segmentis erecto-patulis, 8–12^{mm} longis, basi 2^{mm} latis. Corolla pallide flava, anguste campanulata, vix furfuraceo-puberula, fere 3^{cm} longa. Staminum filamenta 6–7^{mm} longa; capitulum antherarum 6^{mm} longum. Pedunculus fructiferus robustiusculus, 7–8^{mm} longus. Fructus sparse pilosus, (maturus ?) 3.5^{cm} longus, 17^{mm} crassus.

Carrizal, Depart. S. Rosa, Guat., alt. 5,000^{ft}, Nov. 1892, Heyde & Lux, no. 4,186.

Cyclanthera Donnell-Smithii Cogn. (§ EUCYCLANTHERA); ramis glaberrimis; foliis breviter petiolatis, trifoliolatis; foliolis breviter petiolulatis, undulato-denticulatis, glabratis, supra

sparse punctato-scabriusculis, mediano oblongo-lanceolato, acutissime breviterque acuminato, lateralibus valde asymmetricis, ovato-oblongis, acutis; cirrhis bifidis; racemis masculis petiolo brevioribus, paucifloris; floribus minutis.

Rami graciles, elongati, angulato-sulcati. Petiolus gracilis, striatus, glaber, 2–3^{cm} longus; petioluli leviter puberuli, 3–5^{mm} longi. Foliola tenuiter membranacea, intense viridia; terminale 6–7.5^{cm} longum, 2–2.5^{cm} latum, basi acutum; lateralia 3.5–5^{cm} longa, 1.5–2.5^{cm} lata, basi extrinsecus auriculata. Cirrhi graciles, longissimi, sulcati, glabri. Pedunculus communis masculus filiformis, sulcatus, leviter puberulus, 0.5–1.5^{cm} longus; pedicelli capillares, patuli, 2–3^{mm} longi. Flores ut videtur vix 2^{mm} lati. Calycis dentes subnulli.—Species *C. gracillimæ* Cogn. (DC. Monogr. Phan. **3:** 834) proxima.

San Miguel Uspantán, Depart. Quiché, Guat., alt. 6,000^{ft}, Apr. 1892, Heyde & Lux, no. 3,345.

Burmeistera cyclostigmata Donnell Smith. — Suffrutex orgyalis ramosus. Folia longe petiolata lanceolato-elliptica, termino utroque praecipue superno acuminato, margine glanduloso-punctulo, costis lateralibus utrimque 10–12 supra impressis subtus prominulis, venulis pellucidis. Pedunculi folia superantes. Calycis tubus longiuscule campaniformis lobis oblongis sublongior. Corollæ tubus dorso breviter fissus, lobi valde inaequales recurvi secundi. Antheræ omnes prorsus nudæ. Stigmatis magni lobi suborbiculares.

Leaves $3\frac{1}{2}$–$5 \times 1\frac{1}{2}$–$1\frac{3}{4}$^{in}, paler beneath, lateral nerves forming intramarginal arches, base often unequal, petioles 1–$1\frac{1}{2}$^{in} long. Peduncles 3–$4\frac{1}{2}$^{in} long. Tube of calyx $5 \times 2\frac{1}{2}$^{l}, sometimes narrowing at base, lobes 3–4^{l} long and obtuse. Tube of corolla 6^{l} long, narrowed above; limb unequally partite, oblique, inflated on lower side; 2 superior segments 11–13^{l} long, twice exceeding the 3 inferior; all linear, acute, arcuately deflexed to lower side. Staminal tube adnate to base of corolla, pubescent, $1\frac{1}{2}$^{in} long; anthers lightly recurving, the 3 superior 4^{l} long and twice exceeding the others. Placentas peltate, oval, entire. Lobes of stigma 2–$2\frac{1}{2}$^{l} in diam., barbate beneath.—Nearest to *B. virescens* Benth. et Hook.

Estrella, Prov. Cartago, Costa Rica, alt. 4,400^{ft}, Apr. 1888, Juan J. Cooper, no. 5,845.

Psammisia symphystemona Donnell Smith.—Tota glabra. Rami teretes. Folia subdisticha coriacea elliptica longe caudato-acuminata basi obtusa 3–5-plinervia minutim

reticulata, venis intramarginalibus transversis crebris. Racemi sessiles, rhachi brevissima, pedicellis confertis gracilibus basi bracteatis supra basin bibracteolatis. Stamina aequalia tertiam partem corollæ attingentia, filamentis in tubum connatis, antheris prope basin affixis; omnibus ad apicem connectivi 2-calcaratis.

Epiphytal, 8–10^{ft} long (Cooper). Branches pale, internodes 9–15^{l} long. Leaves 5–7 × 2–3^{in}, more narrowing above the middle than below, caudate prolongation 9–12^{l} long, interior 2 lateral nerves arising 3–4^{l} above base and like midrib very prominent beneath, the exterior 2 basal and obscure. Petioles 2^{l} long. Rhachis 2–5^{l} long; pedicels articulated at base, 5–8^{l} long; bracts ovate; bracteoles lanceolate, glandular-denticulate, like bracts very minute and colored. Tube of calyx campanulate, 2^{l} high; limb as long, spreading; lobes round, mucronate-acuminate, 1^{l} long. Corolla red, sprinkled toward apex with red glands, cylindrical-tubular, 13–15^{l} long, tapering above stamens, lobes triangular-oblong, 2 × 1^{l}. Filaments persistently connate, 2^{l} long; anther-cells 2^{l} long, twice exceeding their tubes. Style exsert.

Mariposa, Prov. Alajuela, Costa Rica, alt. 5,500^{ft}, May 1887, Anastasio Alfaro, no. 5,842.

GAULTHERIA ODORATA HBK., var. **Costaricensis** Donnell Smith.—Folia orbiculari-ovata subintegra, costis lateralibus utrimque 3–4 subtus prominentibus usque ad apicem fere adscendentibus. Bracteolæ semipollicares.

Estrella, Prov. Cartago, Costa Rica, alt. 4,400^{ft}, Mch. 1888, Juan J. Cooper, no. 5,841.

Calceolaria Irazuensis Donnell Smith. (§CHEILONCOS Wettst.)—Herbacea adsurgens ferrugineo-glanduloso-pubescens. Folia ovato-lanceolata basi cuneata, uniuscujusque jugi alterum aliquantum minus, grosse dentata supra puberula subtus pallida et praeter nervos glabra petiolata. Pedunculi terminales 2 longissimi foliis ternatis bracteati, cymis corymbiformibus nutantibus, pedicellis filiformibus, floribus inter maximas. Corollæ labium superius semi-globosum calycem subaequans ab inferiori obovato breviter aperto 3-plo superatum. Antherarum loculi confluentes.

Stem stout, sparingly branched, 3–4^{ft} long. Leaves 2½–4 × 1–1½^{in}, petioles 3–6^{l} long. Peduncles 3–4^{in} long; bractlets 2, foliaceous, unequal, ¾–1¼^{in}, subtending viscid-pubescent corymbs 1¾–2½^{in} high and 7–12-flowered. Calyx-segments

nearly free, ovate-acuminate, 3×2^{l}, 5-nerved, tipped with a gland. Corolla obovate, $10–12 \times 5–6^{l}$, yellow, pluri-nerved, sprinkled with minute dusky glandular hairs, barbate at insertion of stamens. Anthers stout, arcuate; cells $\frac{3}{4}^{l}$ long, divaricate from apex of shorter filament. Stigma incrassate. Capsule glandular-punctate.

Moist, shaded slopes of Volcán Irazú, Prov. Cartago, Costa Rica, alt. 9,000^{ft}, Mch. 1894, J. D. S., no. 4,904.

Spathacanthus Donnell-Smithii Lindau.—This determination of no. 1,030 must be substituted for the erroneous one, *Macfadyena simplicifolia* Botan. Gaz. **16:** 198, the specific name being dropped as inappropriate for an *Acanthacea.*

Pisonia macranthocarpa Donnell Smith. (*P. aculeata* L., var. *macranthocarpa* Donnell Smith in Botan. Gaz. **16:** 198). —Arbusculus inermis. Folia obovata vel oblongo-elliptica apice rotundata vel plus minus obtuse acuminata in petiolum cum costa et cymis pubescentem attenuata ceterum glabra. Cymæ corymboso-fasciculatæ, pedicellis longiusculis (fructiferis valde elongatis), perigonio tubuloso-infundibuliformi, floribus hermaphroditis. Anthocarpia magna oblongo-obovata ad costas glandulis pluriserialibus longe stipitatis muricata.

Erect, 12–18^{ft} high, branchlets occasionally spine-like. Leaves opposite, often fasciculate in axils, $1\frac{1}{2}–2\frac{1}{2} \times \frac{3}{4}–1\frac{1}{2}^{in}$, the younger sprinkled beneath with cystoliths; petioles $3–5^{l}$ long, marginate, at length glabrous. Peduncles axillary and terminal, $8–12^{l}$ long, in fruit elongated; corymbs subglobose (1^{in}); bracts orbicular-ovate (1^{l}); bractlets near apex of pedicel 3, oblong ($\frac{3}{4}^{l}$). Perigonium puberulous, $2\frac{1}{2}–3^{l}$ long, twice to thrice exceeding pedicel, lobes 5 and ovate ($\frac{1}{4}^{l}$). Stamens nearly free, 6–7, didynamous, exsert, anthers orbicular. Style included, stigma minutely laciniate. Cymes in fruit 5–6^{in} in diam., pedicels $1\frac{1}{2}–2^{in}$ long; anthocarps $9 \times 4\frac{1}{2}^{l}$, flavo-tomentulose, stipes of glands lageniform ($\frac{1}{4}^{l}$).

Escuintla, Depart. Escuintla, Guat., alt. 1,100^{ft}, Apr. 1890 and Feb. 1892, J. D. S., nos. 2,091 and 1,230.—Los Verdes, Depart. Amatitlan, Guat., alt. 3,500^{ft}, Oct. 1893, Heyde & Lux, no. 6,301.

TRIPLARIS MACOMBII Donnell Smith in Botan. Gaz. **19:** 237, var. **rufescens** Donnell Smith.—Folia utrimque praecipue subtus ad nervos pilosiuscula. Calycis rufescentis lobi interiores plerumque plus minus exserti, interdum lineares exteriorum dimidium paene aequantes.

Tree 30–50ft high; flowers brick-red.

Mazatenango, Depart. Suchitepéquez, Guat., alt. 1,200ft, Jan. 1894, Heyde & Lux, no. 6,375.

Pseudolmedia oxyphyllaria Donnell Smith.—Primo sericea, cito aetate provectiore glabrata. Folia semipedalia et ultra ter quaterve longiora quam latiora oblongo-lanceolata in acumen longiusculum obtusum angustata ad basin acuta subinaequilatera falcata, costis subtus prominentibus in utroque latere circa 20. Capitula mascula singula vel 2–5-glomerata; involucri bracteæ externæ deltoideæ, internæ ovatæ, cunctæ autem acutæ; receptaculi concavi magni bracteolæ rhomboideo- vel lanceolato-spatulatæ. Stamina numerosissima, antheris nudis ad basin breviter auriculatis.

Tree 20–30ft high. Branchlets terete. Leaves 6–8 × $1\frac{1}{2}$–$2\frac{1}{4}$in, glabrous; petioles pubescent, 3l long. Heads about 5l in diam.; bracts cano-sericeous with scarious margins, the interior 3l long; bractlets cano-sericeous, lacerate, exceeding stamens. Anthers 1l long. Female heads not seen.

Slopes of Volcán Tecuamburro, Depart. S. Rosa, Guat., alt. 6,000ft, Febr. 1893, Heyde & Lux, no. 4,429.

Pilea Costaricensis Donnell Smith.—Dioica glabra. Folia in eodem jugo maxime inaequimagna admodum autem conformia, alterum nempe majus oblongo-ellipticum longiuscule cuspidato-acuminatum basi aliquantulum inaequilaterum et plerumque obtusum longe petiolatum, alterum quadruplo minus breviusque petiolatum oblongo-lanceolatum a medio utrimque sensim angustatum, ambo 3-nervia subtus pallida et evenia supra basin integram incurvo-crenulata, nervis lateralibus apicem fere attingentibus. Cymæ brevissime pedunculatæ, masculæ a petiolo folii majoris feminæ a petiolo folii minoris superatæ.

Herbaceous, ascending 1–2ft from a rooting base, branching. Leaves, especially beneath, occupied by linear cystoliths; the larger in the pair $3\frac{1}{2}$–$5\frac{1}{2}$ × $1\frac{1}{2}$–$1\frac{3}{4}$in, more narrowing above the middle than below, cuspidate tip 4–6l long, petioles 1–2in long. Masculine cymes 6–8l high, perianth 2l in diam. with oblong segments exceeded by anthers; feminine cymes less evolute, exterior segments of perianth scarious-tipped and twice exceeded by obliquely oval ($\frac{3}{4}$l) achenium.

Estrella, Prov. Cartago, Costa Rica, alt. 4,400ft, Apr. 1888, Juan J. Cooper, no. 5,952.

Dioscorea calyculata Donnell Smith. (§ EPISTEMON Griseb. in Fl. Brasil.)—Omnibus in partibus glaber. Folia tenuiter membranacea inter minora subcordata vel subcordato-ovata acutissime acuminata et mucrunculata, basi ima cuneata cum nervis basalibus 3–5 in petiolum marginatum decurrente. Racemi filiformes elongati, pedunculis furcatis, pedicellis solitariis basi bracteolatis subflore bibracteolatis. Perianthii masculini minimi infundibulari-rotati segmenta exteriora orbicularia, interiora oblongo-obovata. *2a*

Herbaceous, twining. Leaves alternate, $1\frac{3}{4}$–$2\frac{1}{2} \times 1\frac{1}{4}$–$2^{in}$, the younger ovate-lanceolate with a filiform mucro, petioles 6–14^{l} long. Racemes 6–10^{in} long, axillary or composing an elongated terminal panicle; peduncles 2–3-furcate, 2–3^{in} long; pedicels 1^{l} long; basal bracteole filiform, exceeding pedicel; apical bracteoles opposite, ovate ($\frac{1^{l}}{3}$), persistent. Tube of male perianth very short, segments $\frac{2^{l}}{3}$ long; stamens 6, all perfect, inserted at base of segments; filaments flat, attenuate upwards, incurved at apex, exceeding perianth; anthers many times shorter than filament, oblong, arcuate, affixed at middle. Rudimentary ovary globose, exceeding tube of perianth, styles united and at apex 3-lobed. Pistillate flowers and fruit not seen.

Alajuela, Prov. Alajuela, Costa Rica, alt. $2{,}700^{ft}$, Nov. 1887, Anastasio Alfaro, no. 5,959.—Guachipilin, Depart. S. Rosa, Guat., alt. $2{,}500^{ft}$, Nov. 1893, Heyde & Lux, no. 6,260.

Baltimore, Md.

[From the Botanical Gazette, Vol. XIX. Page 466.]

New genus of Umbelliferæ.—WITH PLATE XXXII.—Mr. John Donnell Smith has recently sent us from his last collection in Central America a new genus of Umbelliferæ. This is a most peculiar plant, not closely related to any known genus, nor is it easily referred to any tribe. It becomes a small tree fifteen feet high and is the only arborescent species which we have seen from North America. Only two plants were seen, growing at an altitude of 10,200ft and constituting the highest vegetation on the volcano.

This is the third genus of Umbelliferæ that has been brought to light by Mr. Smith in Central America. We have previously reported upon Guatemalan Umbelliferæ in this journal for January and October, 1890, and February, 1893.

Myrrhidendron, genus nov.—Calyx teeth obsolete. Fruit linear, flattened dorsally, glabrous, shining. Carpels strongly flattened dorsally; dorsal and intermediate ribs low; lateral ribs narrow-winged. Stylopodium low conical. Oil-tubes solitary in the intervals, two on the commissural side. Seed strongly flattened dorsally, with a flat face and furrowed under the oil-tubes.—Arborescent. Leaves large, decompound; leaflets ovate. Flowers white.

A peculiar genus, with fruit of the shape and texture of *Myrrhis* but differently flattened. The carpels are flattened as in *Peucedaneæ* but in other respects unlike that tribe.

Myrrhidendron Donnellsmithii sp. nov.—A small tree 3.6 to 4.8m high; trunk 7.5cm in diameter: leaves large, 30cm or more long, ternately compound; leaflets ovate to lanceolate, 2.5 to 5.0cm long, acute, sharply and often irregularly serrate, the teeth more or less mucronate-tipped, glabrous, shining and impressed veiny above, dull and paler beneath and conspicuously reticulate; petiolules with a prominent stipular ring which is more or less glandular tufted; petioles large, inflated: peduncles short: involucre few-leaved; involucels numerous, 3- to 4-toothed or cleft near the apex, scarious margined and strongly purplish veined: inflorescence more or less glandular puberulent; rays numerous, rarely equal; pedicels 8 to 10mm long: fruit linear, 10 to 12mm long, glabrous.—From the lava beds at the summit of the volcano Irazii in the province of Cartago, Costa Rica, March, 1894 (no. 4,825).—JOHN M. COULTER and J. N. ROSE, *Lake Forest, Ill.* and *Washington, D. C.*

[From the Botanical Gazette, Vol. XX.]

New or noteworthy Compositæ from Guatemala.

JOHN M. COULTER.

WITH PLATES V AND VI.

Capt. John Donnell Smith has submitted to me his recent collections of Compositæ from Guatemala, and the following results are thought worthy of publication. All of the most critical material was taken to the Gray Herbarium and Library for final study, where every facility for work was provided through the courtesy of the curator, Dr. B. L. Robinson.

VERNONIA CANESCENS HBK.—Aquacatepec, Depart. Zacatepequez, alt. 4,300ft, March 1892, *John Donnell Smith* 2,837. Apparently quite common from Peru and Venezuela to Panama. Reported also from Nicaragua (*Wright*) and Huasteca (*Ervendberg*). Very closely related to *V. geminata* Less. of Brazil, and often confounded with *V. arborescens* Sw. of Central America.

Vernonia Luxensis, n. sp.—A shrub 3m high, glabrous except more or less pubescence in the inflorescence which forms large pyramidal clusters of more or less leafy panicles: leaves oval, tapering at both ends and petioled, upper ones often narrower, entire or obscurely toothed: involucral scales in five or six rows, innermost ones linear-oblong and often quite elongated, the outer ones gradually passing into much broader and shorter forms, all sharp pointed and membranous except for the greenish center and tip: heads 3 or 4-flowered, cylindrical, more or less pedicellate: achenes strigose pubescent, often densely so.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000ft, April 1892, *Heyde & Lux* 3,421.

Very nearly related to *V. Palmeri* Rose from Alamos (N. W. Mexico), but differing in pubescence, leaves and involucral scales.

Vernonia Heydeana, n. sp. Like the last; but lower (2^{m} high), with broader leaves which are often not so taper-pointed at either base or apex, 6-flowered heads, involucral scales in but two or three much looser series and all of them obtuse, and glabrous achenes.—San Miguel Uspantán, Depart. Quiché, alt. 6–12,000^{ft}, April 1892, *Heyde & Lux* 3,392.

The two preceding species, with *V. Palmeri* Rose, may all be forms of one shrubby species which extends the whole length of western Mexico. With the material at hand the forms are readily separated, but they give evidence of such close relationship that more abundant material may show intergradations.

VERNONIA PATENS HBK.—Santa Rosa, Depart. Santa Rosa, alt. 3,000^{ft}, February 1893, *Heyde & Lux* 4,524.—A South American shrub 2 to 3^{m} high, heretofore not reported north of Panama, but likely to have been confounded with *V. Deppeana* Less.

Vernonia Shannoni, n. sp.—A tree (height unreported): leaves long-oval, taper-pointed at each end, petioled, entire, glabrous: heads 5-flowered, somewhat closely corymbose and pedicellate: involucral scales in five or six rows, the inner ones elongated-oblong and obtuse, the outer ones becoming gradually shorter, more broadly ovate and acutish, all somewhat purplish-tinted and sparsely hairy on the margins: achenes glabrous.—"Continental divide," Depart. San Márcos, alt. 9,191^{ft}, January 1892, *W. C. Shannon* 605.

The material is very scanty, but seems sufficient for characterization and subsequent recognition. Apparently very nearly related to *V. liatroides* DC. and *V. serratuloides* HBK., but they are herbaceous. Mr. Shannon notes the tree as being "white-flowered."

Ageratum rugosum, n. sp.—More or less rough pubescent throughout: leaves short petioled, ovate, crenate, acuminate, thickish (almost coriaceous), somewhat scabrous above and more softly and abundantly hairy beneath especially along the prominent reticulations, 5 to 7^{cm} long: heads purple-flowered, the linear involucral scales with slender often elongated acuminations: pappus of five lanceolate scales, but one, two or three of which taper into awns: achenes very glabrous.—Santa Rosa, Depart. Santa Rosa, alt. 3,000^{ft}, November 1892, *Heyde & Lux* 4,243.

The whole habit of this species is that of *A. corymbosum*

Zucc., to which doubtless it has often been referred; but its pappus refers it at once to EUAGERATUM and near to *A. conyzoides* L., from which species it differs in general habit, leaves, and pappus. I have seen an unnamed West Indian specimen all of whose pappus scales are not awned, but whose other characters refer it more nearly to *A. muticum* Grisebach, and which probably represents a form intermediate between *A. muticum* and *A. conyzoides*.

STEVIA NEPETAEFOLIA HBK.(?)—Ojo de Agua, Depart. Santa Rosa, alt. 3,500ft, September 1892, *Heyde & Lux* 3,780. The plant is evidently this species, but the leaves are less strongly toothed and less pubescent than in the usual form.

EUPATORIUM EHRENBERGII Hemsley.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000ft, March 1892, *Heyde & Lux* 3,427. A species closely related to *E. Benthamii* Klatt and *E. septuplinervium* Klatt, but those species have much more numerous flowers. Our specimens differ from Klatt's description of *Hebeclinum Ehrenbergii* Sch. Bip. (Flora, 1885, 202) in having about twenty-five flowers instead of fifty, and in the involucral scales being decidedly glandular tomentose, as is the whole inflorescence, and inclined to be obtuse, instead of "puberulent and acuminate."

EUPATORIUM FILICAULE Sch. Bip.—Jumaytepeque, Depart. Santa Rosa, alt. 6,000ft, November 1892, *Heyde & Lux* 4,234. In the Gray Herbarium there are specimens of this species extending from Venezuela (*Fendler*) to Orizaba, Mexico. A closely allied species in Chihuahua is *E. Palmeri* Gray. A character not mentioned by Dr. Gray (Proc. Amer. Acad. **21:** 383) in contrasting the two species may be of service in separating them. In *E. Palmeri* the involucral scales are very narrow, sharply pointed and entire; while in *E. filicaule*, although there are similar scales, most of the scales are apt to be a little broader and more or less toothed at apex, sometimes becoming blunt and with broad more or less toothed or incised apex. In our specimens the heads are 12-flowered. Characterizations of this species will be found not only in Proc. Amer. Acad. **21:** 383, but also l. c. **27:** 170.

Eupatorium griseum, n. sp. Whole plant (including both leaf surfaces) hirsutely and somewhat glandular pubescent, giving it a grayish cast: leaves opposite, perfectly cordate with a somewhat acuminate apex, sharply dentate, lower surface grayer and more hirsute than the upper, 8 to 10cm long

by 7 to 8^{cm} broad, rather long-petioled below, becoming sessile and much reduced towards and in the inflorescence which is open and comparatively few-headed: heads rather large (12^{mm} high), more than 20-flowered: involucral scales obtuse, glandular pubescent on the back and apt to be purplish-tinged, the inner narrower ones occasionally acutish, all conspicuously striate-nerved: achenes minutely pubescent on the sharp angles.—Casillas, Depart. Santa Rosa, alt. 4,000^{ft}, December 1892, *Heyde & Lux* 4,250.

In De Candolle's § SUBIMBRICATA, with the large-headed Brickellia-like forms, such as *E. Parryi* Gray and *E. Fendleri* Gray, but more nearly related to the South American *E. urticæfolia* L.

EUPATORIUM GUADALUPENSE Spr.—Rinconcito, Depart. Santa Rosa, alt. 4,000^{ft}, November 1892, *Heyde & Lux* 4,206. This widely distributed species has gone under the name of *E. paniculatum* Schrad. in the West Indies, *E. Sinclairii* Benth. in Central America, and *E. Guadalupense* Spr. on Guadalupe Island.

EUPATORIUM HEBEBOTRYA (DC.) Hemsley.—Chiapas, Depart. Santa Rosa, alt. 3,500^{ft}, December 1892, *Heyde & Lux*. A species of Costa Rica, and apparently reported but once from Mexico (*Haenke*).

EUPATORIUM PAUPERCULUM Gray.—Santa Rosa, Depart. Santa Rosa, alt. 4,000^{ft}, December 1892, *Heyde & Lux* 4,194. This species was first discovered in Arizona, then in Sonora, and now in Guatemala. The Arizona material, from which the original description was drawn, proves to be not at all representative. The Sonoran and Guatemalan specimens are more or less pubescent, with lanceolate (in the Guatemalan specimens very narrowly so) long acuminate leaves with tapering base and sharply toothed in the middle, loose almost diffuse inflorescence, and corolla more often pink than white.

EUPATORIUM POPULIFOLIUM HBK.—Volcan Tecuamburro, Depart. Santa Rosa, alt. 6,000^{ft}, February 1893, *Heyde & Lux* 4,521. This material has achenes somewhat pubescent. Evidently a very variable species in foliage, the leaves varying from lanceolate with attenuate base to very broad ovate with either truncate or cordate base. *Heyde & Lux* 2,840, from San Felipe, Depart. Retalhulen, alt. 2,050^{ft}, April 1892, has the usual glabrous achenes, and is reported as a showy virgate plant 14^{ft} high.

EUPATORIUM PYCNOCEPHALUM Less.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000ft, May and November 1892, *Heyde & Lux* 3,406 in part and 4,229; Jumaytepeque, Depart. Santa Rosa, alt. 6,000ft, January 1893, *Heyde & Lux* 4,219; San Miguel Uspantán, Depart. Quiché, alt. 6–12,000ft, April 1892, *Heyde & Lux* 3,397. Evidently the same as *E. Schiedeanum* Schrad. Very variable in foliage, but the intergradations are so complete that no varietal distinctions can be drawn. The variations extend from narrowly lanceolate with long acuminate apex to cordate ovate and even rotund towards and in the inflorescence. Reported to be a little more than three feet high.

EUPATORIUM SCHULTZII Sch. Bip.—Teocinte, alt. 2,500ft, February 1893, *Heyde & Lux* 4,515. Entirely too near *E. malvaefolium* DC., and the two should probably be merged. The present material has the involucral scales of *E. Schultzii*, but the heads are more than 20-flowered, as in *E. malvaefolium*, a larger number than is credited to the former species. Reported as nine feet high.

Eupatorium vernonioides, n. sp. of OSMIA.—Shrubby and leafy, with the general aspect of a *Vernonia*, more or less glandular pubescent in the region of the inflorescence and apt to be sparsely so upon the leaf veins (especially beneath), otherwise glabrous: leaves short-petioled, thickish but hardly coriaceous, lanceolate with tapering base and apex (perhaps the lower leaves broader and more rounded at base), entire or obscurely mucronulate-toothed, with prominent midrib and conspicuously reticulated beneath, dark green and somewhat shining above, paler and often reddish tinged beneath, 15 to 20cm long, 2.5 to 4.5cm broad: heads rather numerous in the open somewhat leafy cymes, about 9mm high and 40- to 60-flowered: lower scales of the cylindrical or urn-shaped involucre short and broad, with ciliate margins and glandular pubescence on the back, upwards becoming gradually narrower, longer, more delicate, less glandular and ciliate until the innermost linear scales are almost smooth; all obtuse except a short apiculation of the innermost ones; the striations not distinct, but obscure and irregular, the outer scales especially inclined to a purplish tinting: achenes glabrous (poorly developed in the material at hand).—Cenaguilla, Depart. Santa Rosa, alt. 4,000ft, November 1892, *Heyde & Lux* 4,240.

Related to *E. conyzoides* Vahl.

Willugbaeya globosa, n. sp.—A glabrous twiner or somewhat puberulent in the inflorescence: leaves ovate and acuminate, obtuse at base, with margins (which are obscurely mucronulate) revolute, 5-ribbed near the base and prominently cross-veined, long-petioled, blade 9 to 12^{cm} long, 5 to 7^{cm} broad: heads sessile in glomerate (head-like) clusters which are borne (one to seven in number, usually three or five) at the ends of the opposite somewhat wide-spreading branches of an elongated bracteate raceme: involucral scales very short (about one-third as long as the corolla and pappus), broad and truncate (sometimes a little notched), glandular-puberulent at apex: pappus white: corolla narrowly funnel form: achenes glabrous (or very sparsely pubescent under a lens).—Santa Rosa, Depart. Santa Rosa, alt. 4,000^{ft}, March 1892, *Heyde & Lux* 3,430.

This species is listed as *Mikania globosa* Coulter, n. sp. in the forthcoming part of John Donnell Smith's "Enumeratio Plantarum Guatemalensium," where it seemed desirable to make the nomenclature consistent with that of the other parts. The inflorescence is striking, with its display of globose heads, and the species resembles closely in habit and structure *Mikania smilacina* DC. of Brazil.

WILLUGBAEYA SCANDENS (L.) Kuntze. (*Mikania scandens* Willd.)—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000^{ft}, June 1892, *Heyde & Lux* 3,434. A form with purple flowers and reddish pappus, which is easily separated from the typical form, but which is referred by Hemsley to *M. scandens.*

Coleosanthus Pacayensis. (*Brickellia Pacayensis* Coulter). —Teocinte, Depart. Santa Rosa, alt. 2,500^{ft}, January 1893, *Heyde & Lux* 4,218.

ASTER SPINOSUS Benth.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000^{ft}, April and December 1892, *Heyde & Lux* 3,424 and 4,210. The development of the characteristic spiny branches in these Guatemalan forms is much stronger than in the forms heretofore collected in Northern Mexico and adjacent United States; a development that appears also in specimens from Costa Rica. The spines are often very strong and thick set, flattened like sword blades, 2.5 to 5^{cm} long, evidently doing leaf-work, while the leaves are reduced to the merest rudiments, very different from the "soft subulate spines" of the more northern forms. The longer spines frequently branch.

In the original description Bentham questions the generic reference, a question which may still be seriously raised. Were not the genus Aster so all-embracing it would seem better to separate this species from it generically. It has no stamens in the ligulate flowers, the styles are very short and obtuse, the ligules are exceedingly small, and the whole habit of leaf reduction and spiny phyllocladia is peculiar.

ASTER JAMAICENSIS Less. (*Erigeron Jamaicensis* L.)—Santa Rosa, Depart. Santa Rosa, 3–4,000^{ft}, June 1892, *Heyde & Lux* 3,363. This species of the West Indies has also been found occasionally in southern Mexico. I very much doubt its proper reference to Aster.

CONYZA CORONOPIFOLIA HBK. (Incl. *C. hirsuta* HBK.)—Chiul, Depart. Quiché, alt. 8,000^{ft}, April 1892, *Heyde & Lux* 3,378. Exceedingly variable in foliage even on the same plant. Our specimens represent the very hirsute form with linear-lanceolate mostly entire (but frequently 1- or 2-lobed) leaves described by Kunth as *C. hirsuta*, and usually maintained as a distinct species. The two, however, completely intergrade, and different branches of the same plant will sometimes show all the differences between *C. coronopifolia* and *C. hirsuta*.

MALLINOA, n. gen. of INULOIDEÆ?—Heads many-flowered, homogamous, the flowers perfect: involucre campanulate, with three or four series of imbricate striate bracts, the outer ones shorter: corolla tubular, somewhat narrower below and with a much constricted and easily separable base, 5-toothed, the teeth hairy outside: anthers appendaged, sagittate at base: style-branches long, clavate and obtuse, the conspicuous hairy appendages representing more than half the length: achenes linear, 5-angled, with a prominent indurated base and constricted above to meet the distinct pappus ring which bears numerous stout barbellate bristles as long as the corolla.

Mallinoa corymbosa, n. sp.—Herbaceous, 40 to 50^{cm} high, leafy and hairy at base, naked, smooth and corymbosely branching above: leaves opposite, more or less woolly pubescent on both sides, especially along the venation, rather long petioled, ovate and dentate, obtuse, paler and conspicuously reticulate beneath, 3 to 7^{cm} long (blade), above reduced to bracts: heads about 5^{mm} high, solitary at the ends of the elongated corymbose branches: involucral bracts smooth and striate, oblong, the outer series somewhat shorter, the inner

ones equal, very obtuse, more or less scarious margined: achenes sharply 5-angled, somewhat hairy, especially on the angles.—PLATE V.

Jumaytepeque, Depart. Santa Rosa, alt. 6,000ft, December 1892, *Heyde & Lux* 4,255.

To decide the affinities of this genus is very perplexing, The style characters are those of EUPATORIACEÆ, and its pappus coalesced at base into a prominent ring suggests the Brazilian genus *Symphyopappus* Turcz., but the distinctly sagittate anthers are opposed to such reference. It seems also to resemble certain groups of SENECIONIDÆ, and this may be the true reference, but the involucre is hardly consistent with it. It is tentatively referred here to INULOIDEÆ, to which group it is as easily referred as *Dimeresia* Gray, with which genus it has a number of important characters in common.

NOCCA SUAVEOLENS Cass. (*Lagascea suaveolens* HBK.).—Carrizal, Depart. Santa Rosa, alt. 5,000ft, November 1892, *Heyde & Lux* 4,227. A somewhat variable species, which also includes *L. helianthifolia* HBK., *L. latifolia* DC., and *L. macrophylla* Steud. *Lagascea* Cav. is 1,803, and *Nocca* Cav. is 1,794.

DESMANTHODIUM GUATEMALENSE Hemsley.—Volcan Acatenango, Depart. Zacatepequez, alt. 12,000ft, August 1892, *W. C. Shannon* 3,693. The only record I find of this very interesting plant is the original collection by Salvin on Volcan de Fuego, at 6,000ft, in which material the achenes were immature. The specimens before me have perfect achenes, which show the oboval-oblong outline of the other species, are perfectly smooth, and become black and hard, but instead of being biconvex in section have a flat face and a prominently angled face, giving a low triangular section.

Polymnia Quichensis, n. sp.—Smooth, excepting the more or less roughened leaves, about 1m high: leaves ample, opposite, ovate-lanceolate, acuminate, tapering at base to a short petiole, dentate or denticulate (sometimes almost entire), moderately scabrous above and somewhat pubescent beneath, especially upon the conspicuous reticulations (becoming smoother with age), 12.5 to 25cm long, 5 to 7.5cm wide: heads solitary or few in a terminal corymb whose lateral branches bear at least a pair of ovate (sometimes narrower) acute leaves; the disk about 15mm broad: outer involucral bracts broadly ovate and acute: rays 7 to 15, yellow, linear-oblong,

hairy at base, about 2^{cm} long: disk-corollas tubular-inflated from near the base, prominently glandular-nerved: achenes 5^{mm} long.—Chiul, Depart. Quiché, alt. 8,000^{ft}, April 1892, *Heyde & Lux* 3,375.

Very closely related to the Chilian *P. glabrata* DC. according to the description in DC. Prodr. **5:** 515.

JAEGERIA HIRTA Less. includes *Spilanthes sessilifolia* Hemsley.—San Miguel Uspantán, Depart. Quiché, alt. 6–12,000^{ft}, April 1892, *Heyde & Lux* 3,395, 3,794, 3,796.

SCLEROCARPUS DIVARICATUS Benth. & Hook. was sent out in a previous distribution as *S. uniserialis*, no. 2,376.

MONTANOA MORITZIANA Sch. Bip.—Coban, Depart. Alta Vera Paz, alt. 4,300^{ft}, November 1885, *Tuerckheim* 814. I have not discovered any description of this species, the material having been named from Andean specimens so labelled and distributed by Sonders and by André.

MONTANOA PATENS Gray.—Jumaytepeque, Depart. Santa Rosa, alt. 6, 000^{ft}, December 1892, *Heyde & Lux* 4,216. The specimens are more bushy and profusely flowered than those heretofore collected. The leaves are densely and softly pubescent beneath, glabrous or nearly so above. The species is very near *M. arborescens* DC., to which some of its forms have at times been referred.

Montanoa Samalensis, n. sp.—Apparently a suffruticose plant, about 3^{m} high; branchlets more or less woolly pubescent (becoming glabrate), the inflorescence densely so: leaves (only upper ones seen) petioled, ovate-lanceolate with a rhombic short-cuneate triplinerved base tapering into a more or less winged petiole, acuminate, crenate or somewhat toothed, scabrous-puberulent above, pubescent beneath, 20 to 30^{cm} long (including petiole), 7.5 to 10^{cm} broad in widest part; those that subtend or belong to the inflorescence narrowly lanceolate, acute or acuminate, wing-petioled, nearly or quite entire (the lower ones 15 to 17^{cm} long): inflorescence a lax leafy few-flowered trichotomous cyme: heads long-peduncled, 7 to 9^{mm} high, with about ten narrowly to broadly spatulate white (yellowish in drying), more or less pubescent rays 10 to 15^{mm} long: involucral scales ovate, acute, woolly pubescent: chaff of the receptacle more or less toothed towards the base, broadly truncate, the midrib ciliate on the back and extended as a prominent mucronate point: disk corollas yellow and pubescent.—Rio Samalá, Depart. Retalhulen, alt. 1,700^{ft}, April 1892, *John Donnell Smith* 2,858.

In the rhombic base of the leaves there is indication that the lower leaves may be three-lobed.

Verbesina Donnell-Smithii, n. sp. of VERBESINARIA.—Pubescent, becoming glabrate, about 5^{m} high: stem and branches wingless: leaves ovate to lanceolate, scabrous puberulent above, pubescent beneath, tapering to a more or less winged petiole, acuminate, from sharply serrate or even toothed to almost entire with a few mucronulations, 10 to 20^{cm} long, 3 to 5^{cm} broad: heads about 10^{mm} high, rather numerous in a spreading cyme: involucral scales oval, obtuse, erect and pubescent: chaff of the receptacle pubescent, as are the very broad and somewhat toothed wings of the achenes above and the stout awns.—San Miguel Uspantán, Depart. Quiché, alt. 6–12,000^{ft}, April 1892, *Heyde & Lux* 3,385.

Related to *V. Virginica* L., but distinct enough from the forms of that variable species that I have seen, notably so in the size of its heads.

OTOPAPPUS CURVIFLORUS Hemsley, var. **glabratus,** n. var. Leaves almost entirely glabrous and very long acuminate, only vestiges of the scabrous character above, the lower surface glabrous (instead of woolly pubescent).—Jumaytepeque, Depart. Santa Rosa, alt. 6,000^{ft}, November 1892, *Heyde & Lux* 4,235.

O. curviflorus Hemsley = *Salmea curviflora* R. Br. and *Zexmenia salmeoides* Sch. Bip. It is a serious question whether *O. curviflorus* should not be the basis of a new genus, for the characters are not strictly those of either *Salmea* or *Otopappus*, although the latter genus was extended by Hemsley to include it.

COREOPSIS GALEOTTII Hemsley was distributed in a previous collection as *C. Mexicana* Hemsley, no. 3,792.

COREOPSIS TRIFOLIATA Bertol.—Buena Vista, Depart. Santa Rosa, alt. 5,500^{ft}, December 1892, *Heyde & Lux* 4,193. Apparently reported heretofore only from Volcan de Agua by Velasquez, and described by Bertolini in Fl. Guat.

BIDENS ALAUSENSIS HBK.?—Embaulada, Depart. Zacatepequez, alt. 5,500^{ft}, December 1889, *Heyde & Lux* 4,503; Santiago, same depart., alt. 6,500^{ft}, 1891, *Rosalió Gómez.* A number of South American species of *Bidens* appear in the Guatemalan collections, but there is such confusion of descriptions and of specimens in herbaria, that determinations must be tentative. This species has been reported also from S. Mexico.

BIDENS ANDICOLA HBK.?—San Miguel Uspantán, Depart. Quiché, alt, 6,000ft, May 1892, *Heyde & Lux* 3,404, 3,788. This reference to a species of the Andes of Ecuador is made with some hesitation, on account of lack of type material. With published descriptions and distributed material it accords fairly well. Perhaps the same reference should be made of *John Donnell Smith* 1,678, from Samac, Depart. Alta Verapaz, alt. 4,600ft, but the material is entirely too immature for definite statement.

BIDENS HIRTELLA HBK.—Santiago, Depart. Zacatepequez, alt. 6,500ft, 1891, *Rosalió Gómez* 1,074. This species seems to have been referred only to Mexico and then doubtfully, as though it had not been rediscovered. The material in hand conforms exactly with the published description, but there has been no opportunity of comparison with authentic specimens.

BIDENS HUMILIS HBK.—At the summit of Volcan Acatenango, Depart. Zacatepequez, alt. 12,400ft, August 1892, *W. C. Shannon* 3,691. Heretofore reported only from the mountains of Ecuador. The peduncles and involucral scales are very often hairy, and the heads vary much in size, sometimes becoming as large as those of *B. grandiflora.*

CALEA INTEGRIFOLIA Hemsley, var. **dentata,** n. var. Leaves much thinner, glabrous (except perhaps a little sparse pubescence beneath), very narrowly lanceolate to linear, with conspicuous mucronulate teeth, and tapering into a long almost caudate acumination, the leaves subtending the inflorescence elongated.—Nebaj, Depart. Quiché, alt. 7,000ft, April 1890, *Heyde & Lux* 4,506.

SCHKUHRIA ANTHEMOIDES (DC.) (*Hopkirkia anthemoides* DC. *Schkuhria Hopkirkia* Gray).—*Heyde & Lux* 3,802.

GALEANA HASTATA Llav. & Lex.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000ft, July 1892, *Heyde & Lux* 3,364. The plants are much more leafy than usual, with larger leaves and a fewer-flowered inflorescence than heretofore recorded.

TAGETES LUCIDA Cav.—Santiago, Depart. Zacatepequez, alt. 6,500ft, 1891, *Rosalió Gómez* 1,063; 1892, *Heyde & Lux* 3,798. Our 3,798 is more branching than usual, with obconical (rather than cylindrical) involucres which are 7-toothed (rather than 5) and 15 to 17-flowered (instead of 5 to 7), but the intergradations seem to be too complete for varietal separation.

TAGETES TENUIFOLIA Cav.—*T. pedunculariś* Lag. & Rod.

It seems probable that these two species thus merged, with some others, should be included in *T. patula* L.—San Cárlos, Depart. Quezaltenango, alt. 8,622 , December 1891, *W. C. Shannon* 598.

PECTIS CANESCENS HBK., var. **villosior,** n. var.—Stems and leaves much more woolly pubescent, the involucral bracts densely so, being like those of *P. Liebmannii* Sch. Bip.—Santa Rosa, Depart. Santa Rosa, alt. 3–4,000^{ft}, March and May 1892, *Heyde & Lux* 3,401 and 3,413.

SENECIO GHIESBREGHTII Regel, var. **Uspantanensis,** n. var.—Leaves entire, elongated oblong and acuminate.—San Miguel Uspantán, Depart. Quiché, alt. 6–12,000^{ft}, April 1892, *Heyde & Lux* 3,368; also distributed in previous collection as *S. Ghiesbreghtii*, no. 1,598, with leaves similar but with marginal mucros; also *Botteri*, 609 and 820 from Orizaba. In looking over the allied tree-forms, *S. Ghiesbreghtii* Regel, *S. grandifolius* Less., and *S. arborescens* Steetz, it becomes evident that we are dealing probably with a single species having leaves varying from pinnately divided to entire. *S. grandifolius* Less. must certainly absorb *S. arborescens* Steetz, but I do not feel the same confidence as yet in such a disposition of *S. Ghiesbreghtii* Regel, although Hemsley refers the latter to *S. grandifolius*, but keeps *S. arborescens* distinct.

SENECIO SCHUMANNIANUS Schauer.—Chiul, Depart. Quiché, alt. 8,000^{ft}, April 1892, *Heyde & Lux* 3,377. I have no record of the discovery of this interesting species other than that of Aschenborn about Zimapan. Although no authentic specimens have been accessible Schauer's description in Linnaea completely accords with our plant.

WERNERIA NUBIGENA HBK.—Volcan de Tajumulco, Depart. San Márcos, alt. 12,000^{ft}, January 1892, *W. C. Shannon* 607. A very interesting discovery of a high Andean genus, not reported before north of the high mountains of Bolivia.

PEREZIOPSIS, n. gen. of MUTISIACEÆ.—Heads rather few-flowered (10–15), homogamous, the flowers perfect: involucre conical, with three or four series of dry loosely imbricated narrow bracts, the outer ones short and grading into the bractlets, the inner ones becoming successively more elongated: receptacle densely pilose: corolla elongated, deeply bilabiate, the upper lip broad and 4-toothed, the lower of a single narrowly linear petal, all the lobes erect (not even

spreading); the lower portion of the tube sharply 5-angled with tuberculate ridges, differing sharply from the upper portion: anthers caudate; filaments free and pubescent, arising from the top of the angled base of the corolla tube: stigma lobes short and obtuse, coalescent to maturity (but easily separable), sharply deflexed at the summit of the anther tube; style with an indurated bulbous base which detaches readily from the achene, which is linear and pubescent: pappus of numerous conspicuous puberulent slightly tawny bristles about as long as the flowers.

Pereziopsis Donnell-Smithii, n. sp.—Probably woody below, 1.8 to 2.4^{m} high, densely woolly tomentose at least above: leaves alternate, ample, pinnately divided, white with a dense pannose tomentum beneath, more or less floccose woolly above and becoming glabrate; terminal lobe ample, broadly deltoid, irregularly lobed and dentate, conspicuously palmately veined, 20^{cm} long by 25^{cm} broad at the almost truncate base (dimensions doubtless larger in the lower leaves); lateral lobes (usually two) distant and very much smaller, the intervening rhachis and petiole more or less winged: inflorescence an ample naked corymb, with large terminal heads (about 3^{cm} high) on the elongated branches, the ultimate divisions bracteate: involucral scales narrowly linear and long acuminate, more or less pubescent and purplish tinged, the inner ones becoming as long as or even longer than the head: flowers over 20^{mm} long.—Rio de Los Esclavos, Depart. Santa Rosa, alt. 2,500^{ft}, February 1893, *Heyde & Lux* 4,527. —PLATE VI.

Herbarium Lake Forest University.

EXPLANATION OF PLATES V AND VI.

V. *Mallinoa corymbosa.* Fig. 1. Plant, nat. size.—Fig. 2. A head, enlarged.—Fig. 3. A flower, enlarged.—Fig. 4. Two stamens, enlarged.—Fig. 5. A pistil, enlarged.

VI. *Pereziopsis Donnell-Smithii.* Fig. 1. Portion of a flower cluster, nat. size.—Fig. 2. A leaf, natural size.—Fig. 3. A flower, enlarged.—Fig. 4. The same laid open, enlarged.—Fig. 5. A stamen, enlarged.—Fig. 6. A pistil, enlarged.—Fig. 7. An achene, nat. size.

[From the Botanical Gazette, Vol. XX.] (issue no. 87)

Some Euphorbiaceæ from Guatemala.

JOHN P. LOTSY.

WITH PLATES XXIV AND XXV.

At the request of Capt. John Donnell Smith I undertook the determination of his last acquired Euphorbiaceæ. After classification the specimens were compared by me with those in the Ryksherbarium[1] of the University of Leiden, Holland, and in the National Herbarium at Washington, D. C.

Euphorbia rubrosperma, n. sp. (§ Anisophylli, Chamysyceæ Leiospermæ DC. Prod. **15**[2]: 27.)—Tota crispule hirta, caulibus filiformibus carnulosis ad articulationes incrassatis e basi ramulosis. Folia basi valde inaequalia ovata orbiculata irregulariter dentata acuta vel obtusa, stipulis interpetiolaribus lanceolatis ciliatis basi minutissime bidentatis. Cyathia in axillis supremis cymulosa, involucris minutis campanulatis extus hirsutis intus glabris, lobis angustis extus ad margines ciliolatis. Glandulæ 4 exappendiculatæ cyathiformes longiter stipitatæ. Ovarium hirtum, stilis 3 bipartitis non incrassatis sub lente punctulatis trigonis rubellis.

Santa Rosa, Depart. Santa Rosa, alt. 3,000ft, Dec. 1892, Heyde & Lux, no. 4,271.

A small creeping plant with a firm primary root. The plant when dry has small green leaves, here and there becoming red, as do also the involucres of the inflorescences. Length of one of the creeping branches, 5–6cm. Length of leaves 0.5cm. Length of seed 0.06cm.

Euphorbia Xalapensis HBK. (§ Cyttarospermi DC. Prod. **15**[2]: 53).

San Raphael, Depart. Zacatepéquez, alt. 6,500ft, Febr. 1892, John Donnell Smith, no. 2,617.—San Miguel, Dept. Quiché, alt. 6,000ft, April 1892, Heyde & Lux, no. 3,479.—Laguna di Ayarza, Dept. Jalapa, alt. 8,000ft, Sept. 1892, Heyde & Lux, no. 3,849.—Volcan Jumaytepeque, Dept. Santa Rosa, 6,000ft, Dec. 1892, Heyde & Lux, no. 4,269.

Euphorbia microappendiculata, n. sp. (§ Cyttarospermi.) —Caulis cum ramis oppositis glabris sed ad articulationes

[1] To the subdirector of this herbarium, Dr. J. G. Boerlage, I am indebted for much valuable aid and advice.

pauciter pubescentibus fistulosus ad folia adpresse pubescens. Folia integra, inferiora sparsa, superiora opposita vel ternata; inferiora petiolata ovata acutiuscula, superiora lanceolata, glandulis stipularibus obsoletis. Cymæ terminales vel axillares longiter pedunculatæ 3-cephalæ, involucris longiuscule pedicellatis campanulatis hemisphaericis adpresse pubescentibus, lobis triangularibus pauciter fimbriatis. Glandulæ 4 ovatæ valvatæ, appendicibus rotundatis apice obscure cordatis concaviter inclusis. Stili bipartiti. Capsula ignota. Semen ignotum.

A plant two to three feet high. Leaves pinnately veined with seven to ten pair of secondary veins, covered with scattered hairs on upper side, densely covered on lower side with a grey felt, glabrous on the veins. Bracts of inflorescence spatulate, about one-half longer than the cyathia. Length of blade 5^{cm}. Width of blade at broadest place 2.5^{cm}. Length of petiole $1-1.3^{cm}$.

Laguna de Ayarza, Depart. Jalapa, alt. $8,000^{ft}$, Sept. 1892, Heyde & Lux, no. 3,850.

EUPHORBIA OCYMOIDEA L. (§ CYTTAROSPERMI.)

Rinconcito, Depart. Santa Rosa, alt. $4,000^{ft}$, Nov. 1892, Heyde & Lux, no. 4,263.

EUPHORBIA ARENARIA HBK. (§ CYTTAROSPERMI.)

Ojo de Agua, Depart. Santa Rosa, alt. $3,500^{ft}$, Dec. 1892, Heyde & Lux, no. 4,262.

EUPHORBIA LANCIFOLIA Schlecht. (§ DICHILII DC. Prod. **15**^{2}: 59.)

Rinconcito, Depart. Santa Rosa, alt. $4,000^{ft}$, Nov. 1892, Heyde & Lux, no. 4,264.—Naranjo, Depart. Santa Rosa, alt. $3,500^{ft}$, May 1892, Heyde & Lux, no. 4,581.

Euphorbia leucocephala, n. sp. (§ ALECTOROCTONI DC. Prod. **15**^{2}: 59.)—Frutex glabra juventute lanosa, ramis striatis ad articulationes incrassatis. Folia inferiora verticillata, caetera plerumque ternata vel rarius verticillata; folia longe petiolata, inferiora obovata, superiora oblonga apice mucronata. Dichasia terminalia polycephala. Bractea alba spathulata mucronata involucris triplo vel quadruplo longiora. Cyathia basi externe biglandulata, involucris breve pedicillatis campanulatis hirtis, lobis transverse oblongis ciliatis. Glandulæ quinæ transverse oblongæ, appendicibus integerrimis eis 6-plo longioribus. Stili bipartiti. Capsula glabra profunde trisulcata. Semen ecarunculatum.

Shannon's note says, "a shrub, rather a vinelike shrub. I believe is a vine that grows generally near another (plant) and overtops the companions. Plant 60^{cm}–2.1^{m} high."

Leaves pinnately veined, veins fourteen to sixteen, covered with extremely few hairs on both sides, rather more along the midrib. Some of the leaves turning red, at least in herbarium specimens. Inflorescence remarkable for its numerous white bracts, which has suggested the specific name of *leucocephala*. Very few of the cyathia have female flowers. Dried styles persistent on top of capsule. Seeds, not entirely ripe, with a dried funiculus, which suggests sometimes a small shriveled carunculus. Blade of lower leaves 6–8^{cm} long, at broadest place about 3.5^{cm} wide. Petiole 2–2.5^{cm} long. Ternate leaves 3–4^{cm} long, at broadest place 1.5–2^{cm} wide. Bracts 1–1.5^{cm} long. Capsule about 0.5^{cm} long and equally broad.

Cuilco, Depart. Huehuetenango, alt. 3,800^{ft}, Dec. 1891, Shannon, No. 305.—Volcan Chingo, Depart. Jutiapa, alt. 4,000^{ft}, Oct. 1892, Heyde & Lux, no. 3,661.—Rio Negro, Depart. Quiché, alt. 3,600^{ft}, Mar. 1892, Heyde & Lux, no. 3,482.—Patzicia, Depart. Chimaltenango, alt. 6,500^{ft}, Febr. 1893, Heyde & Lux, no. 6,377.—PLATE XXIV.

EUPHORBIA DENTATA Michx. (§ POINSETTIÆ DC. Prod. **15**^{2}: 71.)

Las Cañas, Depart. Santa Rosa, Nov. 1892, alt. 3,000^{ft}, Heyde & Lux, no. 3,837.

Euphorbia chamaepeploides, n. sp. (§ TITHYMALI sub-sect. *Esulæ* DC. Prod. **15**^{2}: 138.)—Glabra a collo ramosa, caulibus adscendentibus vel erectis, umbellæ radiis tribus. Folia obovata integerrima basi in petiolum attenuata; folia floralia ovata basi obscure cordata sessilia opposita vel ternata. Involucra turbinata, lobis triangularibus margine ciliatis. Glandularum cornua glandulæ latitudini aequilonga. Stili breves bifidi. Capsula glabra profunde trisulcata. Semen ad facies binas internas longitudinaliter sulcatum ad 4 exteriores linea 3–5 fovearum rotundarum exsculptum sub lente totum punctulatum. Caruncula conica.

A very near relative of *Euphorbia chamaepeplus* Boiss. & Gail., perhaps only a variety of it. Only one individual seen. Height of plant 17^{cm}, length of blade 0.6^{cm}, width of blade at broadest place 0.5^{cm}, length of peduncle 0.15^{cm}, length of upper sessile leaves 0.8^{cm}, length of capsule 0.15^{cm}, length of seed 0.1^{cm}.

San Martín, Jilotepeque, Depart. Chimaltenango, alt. 6,000ft, Mar. 1892, Heyde & Lux, no. 3,481.

EUPHORBIA CAMPESTRIS Cham. & Schlecht. (§ POINSETTIÆ.)

Cunén, Depart. Quiché, alt. 6,000ft, April 1892, Heyde & Lux, no. 3,467.

PHYLLANTHUS NIRURI L. (§ EUPHYLLANTHI DC. Prod. **15**2: 374.)

Volcan Jumaytepeque, Depart. Santa Rosa, 6,000ft, Dec. 1892, Heyde & Lux, no. 4,270.

CROTON ELUTERIA Benn. (§ ELUTERIÆ DC. Prod. **15**2: 514.)

Palin, Depart. Amatitlan, alt. 3,560ft, Feb. 1892, John Donnell Smith, no. 2,616.

Croton eluterioides, n. sp. (§ ELUTERIÆ).—Planta in tota parte juvenili lepidota. Folia penninervia utraque pagina lepidota, limbo ovato integerrimo apice breviter acuminato basi rotundato eglanduloso, petiolo quam limbus 2–14-plo breviori, stipulis triangularibus lepidotis. Racemi axillares foliis multobreviores densiflori basi feminini apice masculini. Calycis lacinia utriusque sexus ovata acuta lepidota. Petala utriusque sexus late ovata non lepidota pilosa. Stamina circa 15, filamentis sparse barbatis. Ovarium 2-merum lepidotum. Stili 3 bipartiti, laciniis repetite bifidis.

Differs from *Croton Eluteria* in the number of stamens, the more repeatedly branched style, the much broader and larger leaves which are shortly in place of longly acuminated.

A bush about 12ft high. Leaves when young covered on both sides with silvery scales; these gradually disappear from the upper surface almost entirely, while the lower surface contains on old leaves so few scales that in herbarium specimens, owing to the brown color of the leaf, these appear at first sight rusty-lepidote instead of silvery-lepidote. As far as the specimens at hand go, the number of female flowers seems to vary between one and two at the base. The number of male flowers also is limited. Ripe capsule unknown. Length of blade 10cm, width of blade at broadest place 0.45cm, length of petiole 0.5cm, length of largest capsule found 0.21cm, width of largest capsule found 0.15cm.

Santa Rosa, Depart. Santa Rosa, alt. 3,000ft, June 1892, Heyde & Lux, no. 3,470. —PLATE XXV.

Croton Guatemalensis, n. sp. (§ ELUTERIÆ).—Planta in tota parte juvenili lepidota. Folia penninervia utraque pagina lepidota, limbo ovato integerrimo apice breviter acuminato basi rotundato eglanduloso, petiolo quam limbus 3–4 plo breviori, stipulis obsoletis. Racemi graciliter spicaeformes foliis multo longiores densiflori basi feminini apice masculini. Calycis lacinia utriusque sexus ovata acuta lepidota. Petala utriusque sexus ovato-lanceolata non lepidota margine barbata. Stamina circa 15, filamentis glabris. Ovarium 2–3-merum lepidotum. Stili 3-partiti, laciniis repetite bifidis.

Tree 20–25^{ft} high. Flowering branches of very graceful aspect. Leaves when young covered on both sides with silvery scales; these gradually disappear from upper side so that the older leaves of herbarium specimens appear brown above and silvery beneath, a considerable number of scales remaining however on upper surface. As far as the specimens at hand go, every inflorescence seems to have a solitary female flower with a long peduncle at its base. As is seen from the plate, the male flowers drop pretty early and long before the capsule is ripe, but this may be partly due to the drying. In the female flower a ring-wall can be seen with five episepal bifid glands. The male flower is densely clothed with hairs on the receptacle. Ripe capsule unknown. Seeds (not entirely ripe) smooth.

Santa Rosa, Depart. Santa Rosa, alt. 4,000^{ft}, May 1892, Heyde & Lux, no. 3,035.—PLATE XXV.

JULOCROTON TRIQUETER Baill.

Cerro Gordo, Depart. Santa Rosa, alt. 3,500^{ft}, August 1892, Heyde & Lux, no. 3,838.

ACALYPHA SCHLECTENDAHLIANA Müll. Arg. (§ EUACALYPHÆ DC. Prod. **15**^{2}: 803.)

Barranca de Eminenzia, Depart. Amatitlan, alt. 1,400^{ft}, Feb. 1892, John Donnell Smith, no. 2,618.

ACALYPHA CANCANA Müll. Arg. (§ EUACALYPHÆ.)

Rio de Los Esclavos, Depart. Santa Rosa, alt. 2,500^{ft}, Feb. 1893, Heyde & Lux, no. 4,580.

ACALYPHA MACROSTACHYA Jacq., var. SIDÆFOLIA Müll. Arg. (§ EUACALYPHÆ.)

Pansamalá, Alta Vera Paz, alt. 3,800^{ft}, Oct. 1888, von Türckheim, no. 1,417.

TRAGIA VOLUBILIS Müll. Arg. (§ EUTRAGIÆ DC. Prod. **15**^{2}: 932.)

Estanzuela, Depart. Santa Rosa, alt. 2,500^{ft}, Aug. 1892, Heyde & Lux, no. 3,846.

Tragia Guatemalensis n. sp. (§ EUTRAGIÆ.)—Frutex scandens pube brevi et pilis urentibus dense obsita. Petiolus limbo foliorum 2–4-plo brevior, limbo basi palmatinervio et cordato apice breviter acuminato. Racemi longe pedunculati non bipartiti basi flores duos femininos apice flores plures masculinos gerentes. Bractea feminina aequaliter tripartita; bractea masculina tripartita, lobo medio longiore. Pedicellum masculinum articulatum, parte persistente bractea longiore.

Calycis femininæ lacinia 6 lanceolata, calycis masculinæ lacinia 3. Stamina 3.

Leaf palmatinerved at the base with about five veins, the middle one strongest forming the midrib of the leaf. Secondary veins pinnate, three to four pairs. Inflorescence about the length of the petiole. The two female flowers have such long peduncles that they reach about as high as the top of the male part of the inflorescence. Fruit densely covered with bristly hairs. Seeds globular, pale yellow with brown irregular dots. Length of limb of leaf 0.73^{cm}. Width of limb of leaf at broadest place 0.3^{cm}. Length of petiole 0.18^{cm}. Diameter of fruit 0.1^{cm}. Diameter of seed 0.4^{cm}.

Chicacao, Depart. Alta Verapaz, alt. 3,500^{ft}, April 1889, J. Donnell Smith, no. 1,763.

JATROPHA CURCAS L. (§ CURCAS DC. Prod. **15**^{2}: 1,076.)

Santa Rosa, Depart. Santa Rosa, alt. 3,000^{ft}, May 1893, Heyde & Lux, no. 4,582.

HURA CREPITANS Müll. Arg.

Sacapulas, Depart. Quiché, alt. 3,800^{ft}, April 1892, Heyde & Lux, no. 2,901.

Johns Hopkins University.

EXPLANATION OF PLATES XXIV AND XXV.

PLATE XXIV. *Euphorbia leucocephala.*

Fig. 1. Dichasium, the length of the lateral cyathia exaggerated to make relations plainer.—Fig. 2. Diagram of dichasium.—Fig. 3. Involucre from inside, showing lobes, *x*, and appendiculate glands.—

Fig. 4. Enlarged fimbriated lobe of involucre.—Fig. 5. Flowering branch, natural size.—Fig. 6. Cyathium with one female, *ov*, and several male flowers, *st*, showing extracyathial glands, *ex. gl.*—Fig. 7. Node; only the petioles of the leaves drawn, showing stipulate glands. —Fig. 8. Capsule showing position of styles.

Plate XXV.

Figs. 1–6, *Croton Guatemalensis.*

Fig. 1. Flowering branch, natural size.—Fig. 2. Styles, enlarged.—Fig. 3. Ovary in longitudinal section, enlarged.—Fig. 4. Ovary enlarged; *s*, indicates the place where the styles were inserted.—Fig. 5. Male flower, enlarged; *S*, sepals, *P*, petals.—Fig. 6. Female flower after removal of ovary, enlarged; *S*, sepals; *P*, petals..

Figs, 7–10, *Croton eleuterioides.*

Fig. 7. Young inflorescence natural size.—Fig. 8. Female flower in bud enlarged; *P*, petal, *S*, sepal.—Fig. 9. Petal from female bud.—Fig. 10. One style, the two others cut off.

C.E. Faxon, del. B. Maisel, Lith. Boston.

CAPPARIS HEYDEANA. Donnell Smith.

C. E. Faxon, del. B. Meisel, Lith. Boston.

MYRRHIDENDRON DONNELLSMITHII Coult. & Rose.

C E Faxon, del.

B Meisel, Lith. Boston.

MALLINOA CORYMBOSA, Coult.

C. E. Faxon, del

B. Mensel, Lith. Boston

PEREZIOPSIS DONNELL-SMITHII. Coult.

C. E. Faxon, del.

B. Meisel, Lith Boston.

CAVENDISHIA CALLISTA. Donnell Smith.

C. E. Faxon, del.

B. Meisel, Lith. Boston.

ARDISIA PASCHALIS, n. sp.

C. E. Faxon, del.

B. Meisel, Lith. Boston.

CHAUNOSTOMA MECISTANDRUM. Donnell Smith.

Thea Mez ad sicc. del

B Meisel, Lith. Boston.

PHOEBE AMPLIFOLIA, Mez & Donnell Smith.

Thea Mez ad stoc. del

B. Meisel, Lith. Boston.

NECTANDRA HEYDEANA, Mez & Donnell Smith.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 6.

Fig. 7.

Fig. 8.

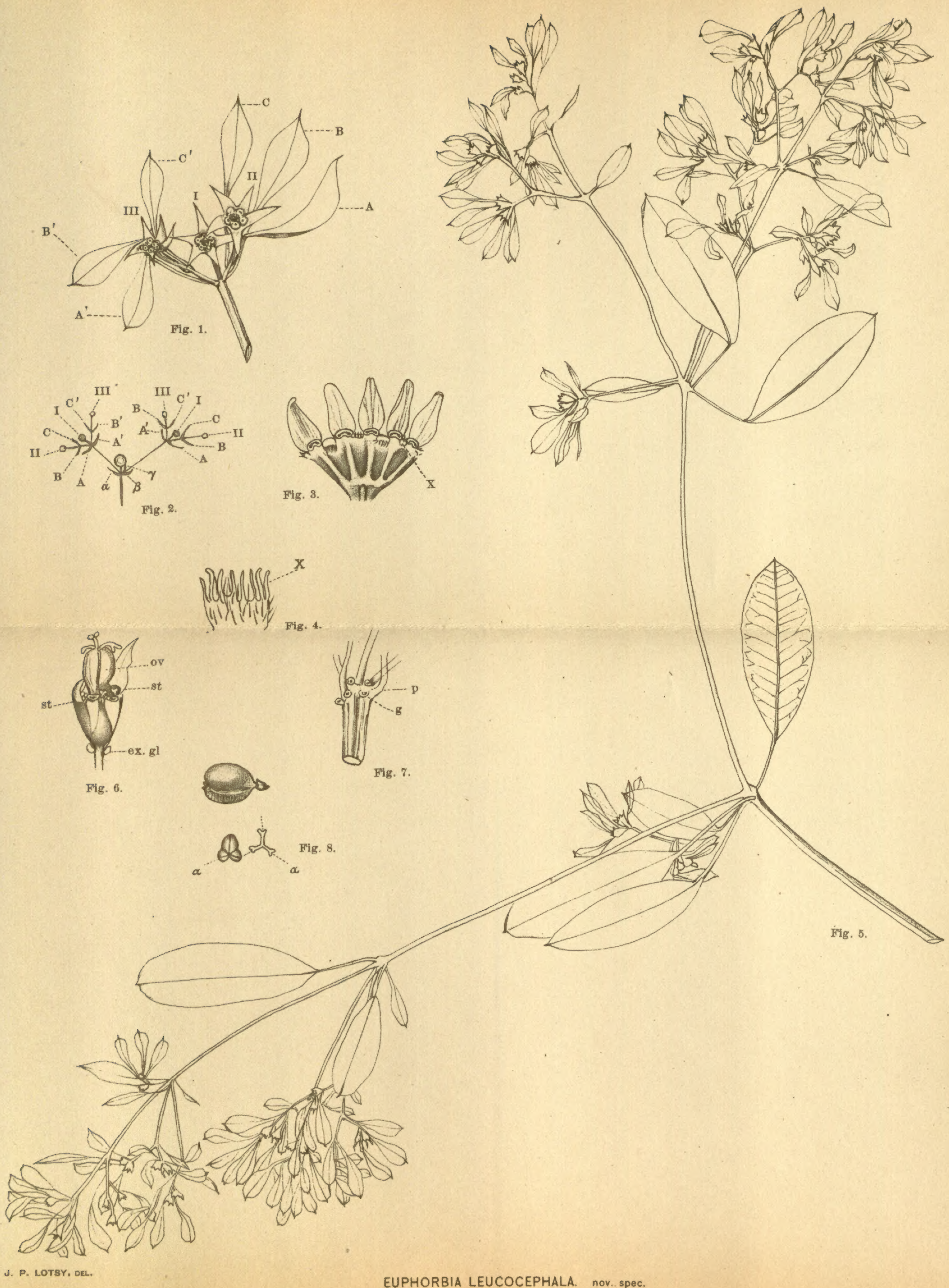


Fig. 5.

J. P. LOTSY, DEL.

EUPHORBIA LEUCOCEPHALA. nov. spec.

Fig. 7.

Fig. 8.

♀ Bud.

Fig. 9.

Fig. 10.

Fig. 1.

Fig. 2.

Fig. 3.

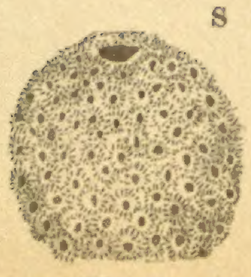
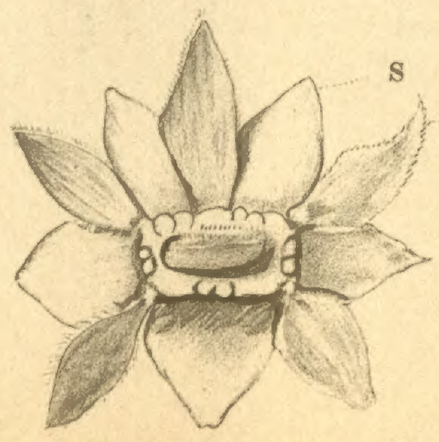


Fig. 4.

Fig. 5.



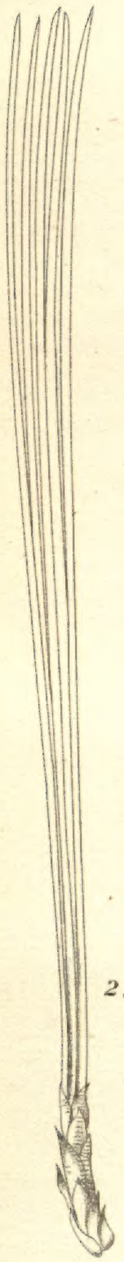
Perianth of ♀ Flower.

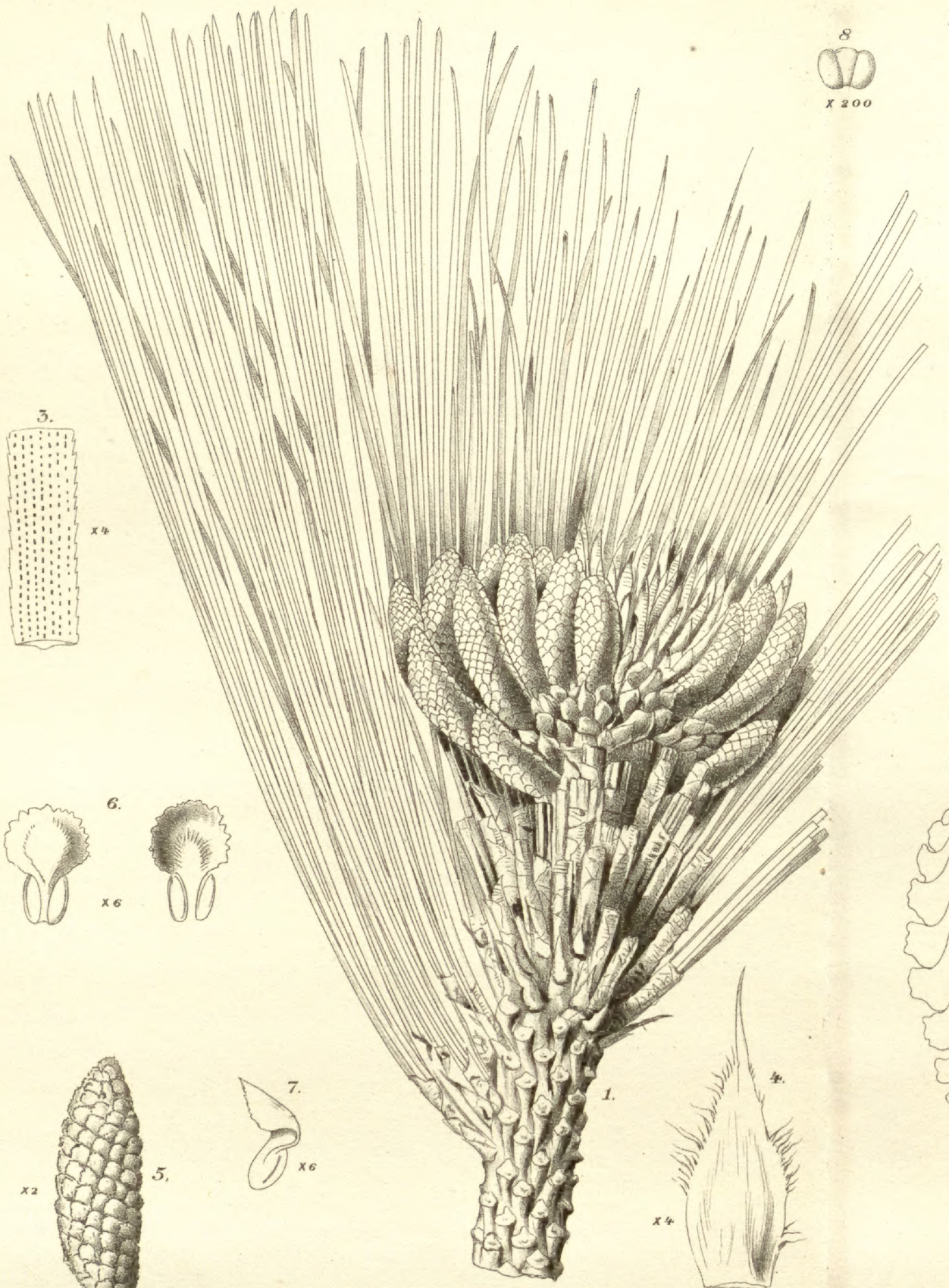
Fig. 6.

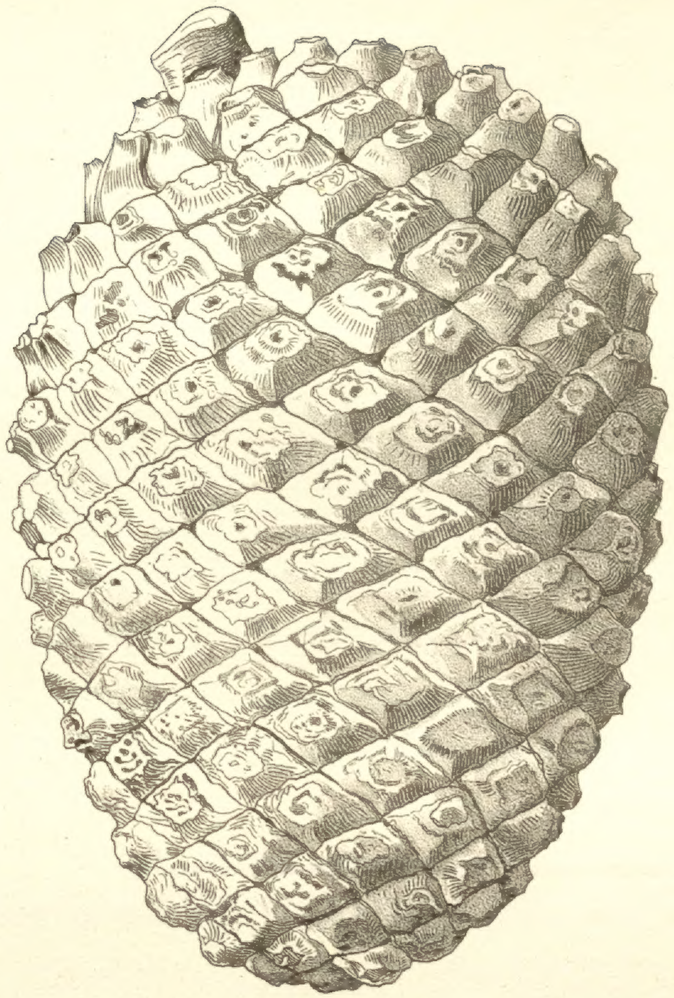
J. P. LOTSY, DEL.

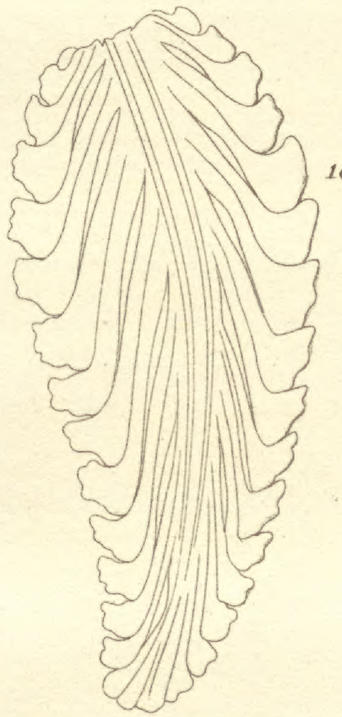
Allman & Co. Lith. Baltimore

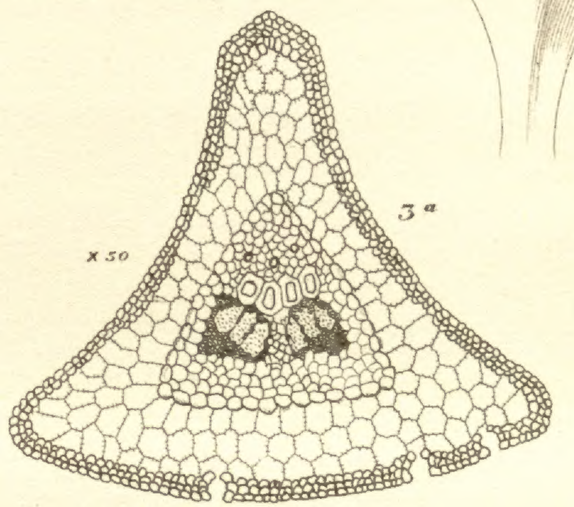
CROTON FLUTERIOIDES [illegible] et CROTON GUATEMALENSIS [illegible]











W. G. Smith, del.

B. Meisel, Lith. Boston.

PINUS DONNELL-SMITHII, Mast.

C. E. Faxon, del.

B. Meisel, Lith. Boston.

GYMNOGRAMME SCIATRAPHIS Donnell Smith.